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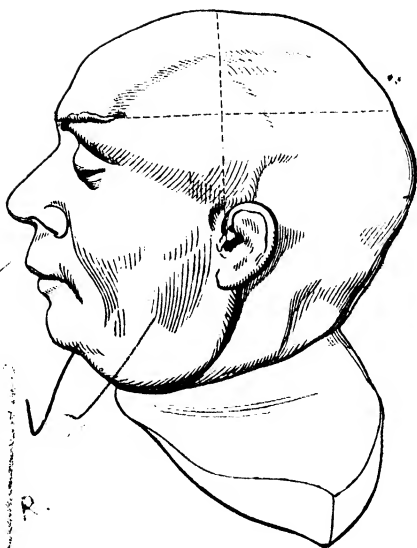
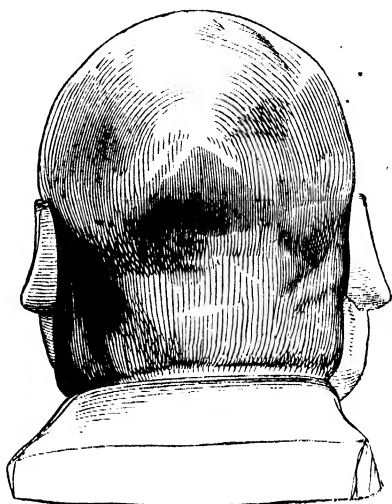
Presented by
Dr. Baridbaran Mukerji

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FOR DEVELOPMENT AND MEASUREMENT, SEE PAGE XII.

PRELIMINARY CHAPTER.

"There should be an enquiry of the seats and domiciles which the several faculties of the mind do occupy in the body, and the organs thereof."—BACON.

"Free will is a mere empty term, and everything we do is done from necessity."—LUTHER ON THE BONDAGE OF THE WILL."

"Even according to the testimony of reason herself, there can be no free will—in man—in angel—or in any creature!"—Ibn.

It is now eleven years since an impression of the following pages, equal to three ordinary editions of a work, similar in extent and nature, was given to the public. The author has been long since removed from a merely phrenological atmosphere, to the more torrid moral climate of an active political life. The prejudices which are insensibly imbibed in favour of a science ardently studied, have had time to wear away. Maturer years, and more enlarged experience, have sobered down the bias of the enthusiastic theorist, to the candour of a ripper judgment; and the writer finds himself still a phrenologist. The science of which he treats has ceased to be a mere acquired habit of his mind, and has gradually become a part of his intellectual nature. As, when objects are seen through the medium of light, the eye is unconscious of the element by which its function operates, and as we are insensible of the existence of the air which sustains our very life, so the phrenologist spells human character phrenologically long after he has forgotten to think directly of phrenology. If the science has long ceased to be a fashion, it is because it has insinuated itself unobtrusively into the public mind as a fact. Even treatises in which it is openly ridiculed, unconsciously adopt its psychical theory; and in a thousand shapes it may be detected in our current literature, as the instrument of illustrating opinion, or the convenient medium for the expression of new views of the philosophy of human character, or for the definition of passion, sentiment, thought, and springs of action.

But the recent history of society calls for a more direct recognition of the claims of phrenology to the patient study and candid consideration of the public. Ethical disquisition has been transferred from the closet of the metaphysician to the bench of the judge; and the theory of moral accountability, no longer confined to the disquisitions of the schoolmen, has assumed an important place in the principles of practical legislation. Social questions clamour so urgently for solution, that the motives which determine human conduct are discovered to press for immediate analysis and anxious investigation. Crime will not wait that the statesman may sleep out his dream. Vice advances while philosophy stands still. It is a pregnant sign of our times that rebellion and revolution no longer turn upon political theories, but upon the pretensions of rival systems of society; and that mankind have at last discovered how much more national prosperity is the result of moral intuitions than of merely physical conditions. A ten hour's bill and an "early closing movement," are but a confession that law and order are the result of giving labour time to read, and think, and feel. Communism is only a wild protest of indignant nature against the universal disregard of those moral duties and social conditions which are essential to the fashioning of the individual into a good and useful citizen. The daily forensic debates which seek to determine where responsibility ends and insanity begins, prove that juriconsults are awakening to the conviction of the necessity of making themselves masters of the mechanism of the mind, before they can hope to discover the external motives which will confine human action within the prescriptions of the law. Ragged schools, penitentiary discipline, reformatory institutions, are so many practical confessions of the paramount claims of mental philosophy. The very thieves meet in public to inquire whether a more accurate knowledge of their own innate tendencies may not form a preliminary condition of the means of improving them; and the annual legislative motion for the abolition of the punishment of death, gradually begins to elicit the misgiving suspicion, that man cannot be made better, until we better know of what elements he has been made.

A crime has recently absorbed the interest of the British public, and startled all Europe by the extent of its consequences, the horror and melodramatic tragedy of its attendant circumstances, and the unparalleled depth of its varied atrocity. Wholesale seduction and sensuality, painstaking deception and treachery, systematic fraud, complicated plans of perjury and forgery, conspiracies of legal robbery, have been consummated by a human monster in parricide, the assassination of a kind stepfather, and the murder which has spared neither station, age, nor sex. Rush has been hanged, an authentic cast has been taken of his head, and we should be well content to peril the fate of phrenology on the result of an analysis of his craniological development. Here may be found the test of the truth of the following pages. If this cast belies them, no sophistry can explain the discrepancy away. This is a head so vitiated by criminal depravity and a bad life as to have placed its owner at last beyond the control of circumstances. From the cradle to the grave it stamps the powerful character which it formed and guided. It teaches so solemn and emphatic a lesson; it suggests such incalculably im-

God has made nothing in vain. Effects illustrate causes—consequences are the teachers of the significance of acts. Punishment for instruction, instruction for correction, correction for repentance, repentance for amendment, amendment for progression, progression for perfectibility, and perfectibility for happiness. God is Love! "He maketh his sun to shine on the just, and on the unjust, and his rain to fall on the evil and on the good." Eternity is given us for something better than to stand still in beatitude, or to be permanent only in torment. Orthodoxy itself confesses the superior efficacy of the promises over the judgments of the gospel; because it offers heaven even to the murderer, in the interval betwixt condemnation and execution. We dare not promise that. We cannot hold out the hope that the depravity of a life, shall be obliterated from the leprous soul, by the repentance of an hour. We do not fear the consequences of assuring even the chief of sinners, that the door of hope is as wide as the sphere of infinite goodness, and that it will never be shut, either in this life, or in that which is to come. We anticipate better fruits of the hardened heart from the words of kindness, than the stern threatenings of despair. Murder that will not stay its red hand for the gallows, will not drop its weapon at the thunder call of spiritual retribution. The man who can be influenced by the belief that even after death he will have time for repentance, and newness of life, is already in the frame of mind best suited for good impressions. The depraved care less for the anger of God than for the vengeance of man.—They who are more alarmed for the state of their soul, than for the terrors of human law, are already beyond the dangers of criminal temptation.

No will is free which is finite. The Omniscient alone is self-existent. Our limited knowledge, if nothing else, would make us necessary agents. The ignorant are ever slaves, and He who knows all things, is the only being who can be free to choose what is best. Mortal man is but a sequent link in the chain of universal causation. The undervived is the only intelligence that can be independent. The First cause, he who was before causation, is alone above, and beyond it. He who created it, is the only essence uncaused, and the only being uninfluenced by an antecedent. We are all but effects, and can be no other than our causes made us. It was no more within the power of Howard to desire to devastate the earth, than in that of Nero to wish to make it happy. The tender heart and the peremptory conscience, crowned by intelligent wisdom, are no less the gift of God, than the instinct of the cannibal, and the ferocity of the Caffre. "Shall there be evil in the city and the Lord hath not done it." But God and Nature have given us reasonable souls to see the beauty of order, the enduring qualities of truth, the excellence of justice. We are endowed with faculties which find delight in virtue, and to discover that the happiness which springs from goodness, has a tendency to perpetuate itself, while vicious indulgence is, invariably, self-destructive. We possess the means of observing that a pure life enjoys the rich sunshine of the heart, and that abused passions never fail to "commend the ingredients of the poisoned chalice to our own lips." Slowly indeed, and with irregular steps, the world proceeds towards improvement. Progress is not great, or very palpably perceptible, for what are 6,000 years even, to immortality and eternity. Those who have gone before us, are, doubtless, far on in the journey of excellence. Perhaps future worlds that now are but nebulae, will have to wait for the mastodon and the megatherium before they can be solid and clear enough for the foot print of Man. But mind or spirit, like the firmament, has its systems, developing in due order the various phases of organism and of progress, and reaching from the germinal vapour cloud up to a solid earth, and a resplendent heaven, through all the stages of moral infancy, up to the glories of intuitive intelligence, and spiritual perfection. What are indeed worlds, and suns, and planets, and systems, but stages on which being, thought, soul, may play their parts; unless, we are to conclude that in all the boundless immensity of space, and in the endless varieties of celestial mechanism, we, on this atom of earth alone, possess sentient and intelligent existence, and but for whom only, the Omnipotent would be but the Great Solitary of his Universe. The meanest thing that hath life, or sense, or the susceptibilities of happiness or misery, or, above all, that hath discourse of reason, can it be otherwise than more precious in the sight of an Omniscient, moral, and spiritual intelligence, than a whole galaxy of even the brightest stars, or the most harmonious and melodious spheres, which yet are insensate and unconscious?—And to what end then can He have called out of nothing this goodly frame of things, and studded the depths of immensity with those bright gems, whose rays travel to us through the ether of a thousand years, and given to them various stages of gestation and progress, if it be not at last to crown these theatres with living, feeling, and thinking actors, who, like them, shall begin in mere organization, and from that go onward to sensation, from thence to memory, imagination, and judgment, a conscience, and a soul, panting at last, like the hart after the water brook, to reach to the divine fellowship of immaculate, infinite intelligence? Either man is not immortal, or else he is progressive. Either his being is to have an end, or his faculties are to go onward in never ceasing development. Either he is to have "his be-all and his end-all here," or else "made a little lower than the angels, and crowned with glory and with honour," he is to undertake with the brightest of the heavenly host, his long long journey and ceaseless search, after the ineffable and divine. Do we not see through the dark night,

become timid and time-serving on this. Such is the evil resulting from the erection of religion into a profession. Were each man to make it the concern of personal investigation and individual inquiry, he would no longer be dependent for his views upon the *dictum* of others, or leave with them his proxy of political and social influence. Were he to feel called upon as a responsible creature to frame his own religious belief, and form, as well as investigate, his own theological opinions, instead of inheriting faith as an heir of a spiritual entail, he would be without prejudices to rouse into intolerance—he would be above the domination of men, whom he was no longer necessitated to entrust with the formation of articles of belief for his guidance and acceptance; and finding from personal experience, the difficulty in which the question was involved, he would have a full measure of charity for whatever conclusions might be the result of the investigations of others, who were discharging conscientiously the duty of examining for themselves. Religion, instead of obstructing, would take rank among the sciences—he studied in the same spirit, and by minds which, in things sacred as well as civil, would be equally open to conviction. By each man being called upon to think for himself, he would infallibly think differently from his neighbour; and the political conspiracy against individuality of opinion, and independence of thought, which is produced by banding theologians into one class of common professional interests, would speedily be crushed with the dispersion of the conspirators who planned it.

Free inquiry has always been obstructed by the priests of prevailing creeds, and ever will be, where it can be done by the exertion of influence. Power is always sweet. Wherever it triumphs, it will be exercised; wherever it is feared, it will domineer. Bigotry and intolerance owe their victory over truth, altogether to the cowardice and dishonesty of philosophers. It has been considered the height of wisdom to be calm and dispassionate. Enthusiasm and intrepidity have been hitherto reckoned as heavy deductions from the sum of sagacity. A bigot has been looked upon as a wild beast, that was to be sopped into slumber, rather than subdued by energy and boldness. Popular superstition it has been thought proper to propitiate by acquiescence, rather than confront by opposition. Error was too formidable to be corrected, intolerance too awful to be bearded; and men at this hour do not scruple to admire and praise the moderation of ancient philosophers, who suppressed the expression of what was unpopular, bowed their heads to the storm of the prevailing prejudices, and pretended to acquiesce in false—so long as they were fashionable—doctrines, trusting, forsooth, to time and change for the success of those views which it was inexpedient at that crisis to maintain or promulgate. Yes, such is the state of modern philosophical morality! Men who pretend to love truth, admire the equanimity of those who concealed it when it was unpalatable, and disclaimed it when it was rejected. And Christ, and Paul, and John, because they loved truth rather than a little life, and preferred sincerity and enlightened religion, to safety and the encouragement of superstition, are pronounced crazy enthusiasts by men who deem themselves philosophers, and are even mistaken for refined and profound thinkers!

Phrenologists are not exempt from a charge, which, without them, already included too many. They have met bigotry by conciliation, not by the assertion of independence; and have been more anxious to disclaim the imputations cast on them by ignorant superstition, than to justify the opinions they have been supposed to entertain by proving their truth. The authority of priestcraft has been strengthened by pleading to its jurisdiction, rather than attacked by denying the competency of the tribunal; and the hierarchy have been encouraged to interfere with the speculations of philosophy, and to raise the hue and cry of heresy, by the supporters of the science pleading the general issue of obedience to orthodoxy, rather than objecting to the relevancy of the accusation of rebellion against established theology. They have satisfied their scruples, by the reflection, that it is needless to offend popular prejudices by an assertion of independence, which the exigencies of the case do not require; and that if clerical mugitations can be silenced, and the ululations of Pharisees prevented, without disputing their right to raise the question, or the accuracy of the standard whereby they propose to measure the opinions on which their demurrage is charged, a great advance without risk is made in the promotion of truth! This is singular language for an honest man, and a strange resource in the hands of a brave one. A tyrant accuses a patriot of endeavouring to compass

the elder revelation, has fixed its own stamp upon the only child whose patentage it can authenticate, the younger inspiration of the gospel of Jesus Christ.

We believe in Christianity, deliberately, advisedly, solemnly, devoutly. Our dependence in it adds much to our soul's comfort, and to our mental satisfaction and happiness. It is the source and centre of our theory of morals, divinity, and psychological philosophy. We say this in no spirit of ostentation, which we now proceed to prove to the satisfaction of the most suspicious, by committing in the eyes of bigotry the unpardonable offence of declaring that we hold belief to be neither an indication of virtue nor a mark of vice, and that, too, upon the authority of the Bible, which preferred the servant who knew not his master's will but did it, to him who knew it and did it not. Although we are sincerely, and from heart-conviction, devoted to Christianity, its truth, its excellence, and the imperishable solidity of its foundation on the Rock of Ages, is, we are quite aware, a mere matter of opinion, held by us in common with many virtuous and able men, and disputed by not a few whose excellence and sagacity we would be proud to emulate. Although we trust we are not among the number of those who make the blaspheming of the precious gift of what they term carnal reason, when it contradicts their principles, an apology for indulging their own spiritual pride, and feel assured that "they only cry out against reason because reason cries out against them," it is without cant or hypocrisy that we state our diffidence in the infallibility of our *own* judgment, and therefore our distrust in the proposition, that it is impossible we can be mistaken in our estimate of Christianity. It is quite possible that the Bible may not be true, because it is perfectly probable that our reason may be fallacious; and, let us not be misunderstood, as too many others have been misrepresented: we are here expressing no doubts of the truth of Revelation, but only our scepticism of our own infallibility, to which the *certainly* of the divine origin of Christianity is an indispensable condition and a necessary preliminary. It is upon this ground, that we complain of the manner in which Phrenologists have hitherto treated the objections urged against the science, of its antagonism to the doctrines of the Bible. They have either had the insincerity to affect a deep respect for a religion in which they did not believe, and thus have given further currency to the monstrous proposition, that mere faith or opinion is meritorious or vicious; or they have, as true Christians, had the bigotry to assume, that the professors of the philosophy would be worse men if their ideas were opposed to their peculiar notions of religion, and have been so lame in their logic as to grant the position, that if their principles of the Bible contradicted Phrenology—a system of pure induction—the latter would, without further evidence, be manifestly false. Christians though we be, we cannot, for the very sake of the rights of conscience or the freedom of inquiry, grant this assumption. It is perfectly possible that Christianity may be inconsistent with nature, because it is very probable that our most sincere convictions and confident opinions may be altogether fallacious. Phrenology, therefore, may be established on a perfectly solid foundation, although it were to be altogether destructive of Revelation. Whether is Truth or Christianity oldest? The former is coeval with, because indeed it is the very essence of, God; and the latter is not above a third of the age of this paltry world. Whether is Truth or Christianity supreme? Truth is the will of God; Christianity, at the best, is no more than a revelation of that will. Christianity, then, is a nonentity, if it be not a discovery of the laws of the Deity; and, as a necessary consequence, if it be not true, it cannot be a revelation. Truth, then, is the basis of all inquiry; and Christianity, if it be anything but a mere delusion, can be nothing more than a section of this universal principle. Thus, the ultimate tribunal to whose decision all controversy must resort, and from whose award there is alone no appeal, is, not Christianity, but Truth, a court of cassation supreme in its decrees—in which the Bible itself must be content to appear, not as a judge but a suitor, deriving its whole title to attention from the favourable verdict which it may there receive, and possessing no jurisdiction whatever over other litigants at the same omnipotent bar and sovereign judicatory. It is plain, then, that the Gospel is not an ultimate standard; and that it were a vain inquiry which was occupied in comparing with it the harmony or discord of other systems.

Neither is that investigation calculated to be more profitable in its results, which proposes for its object, the preliminary consideration of the benefits to be derived, or the injuries to be sustained, from the recognition of Phrenology, as a criterion of its

a drunken mother, taught to kiss his infant hand for a dram, and made to drink a health long before he could say a prayer? Nor is virtue any more than vice, fair features more than faults and failings, exempt from this certain, though inexplicable destiny. How easy is it for him to cherish the sweetness of his temper, whose health is hygeian, and whose life is all that is lovely of sunshine, except its monotony? How natural is honesty to unexhausted wealth, cherished in circles of proud refinement, and supported by early tuition, and more by the ignorance or absence of the example of meanness or dishonour? How notorious, indeed, is it, that each class has its peculiar virtue, and its besetting sin—that, in short, the *fate* of its condition, independently altogether of individual exertion or volition, fixes mind and heart, and feeling, and action, with an absolute dictation, of which man is equally the dupe and the slave? To deny, that from Phrenology may be deduced a fatalism, of which this is an example, would be, in truth, at once to assert that it is not true. We do not, however, the more overlook the fact, that those very men who charge upon the science the inferential infidelity of fatalism, loudly denounce as impious sceptics, the metaphysicians who deny this doctrine in another form. It is, indeed, somewhat strange that the sincere Calvinist, who declares that “Man by his fall into a state of sin hath *wholly lost all ability of will* to any spiritual good”—that “those of mankind that are predestinated unto life, God hath chosen into everlasting glory, *without any foresight of faith or good works*”—that “the rest he was pleased to pass by, and to ordain to dishonour and wrath for their sin, to the praise of his glorious justice”—and that of our first parents, “the corrupted nature was conveyed to all their posterity, *descending from them by ordinary generation*,”—it is, we say, strange and inconsistent, that the believers in such a profession, should dare to tax Phrenologists with infidelity, for holding that man is *born* with a nature that controls his actions, and determines his moral conduct. But we must now terminate our commentaries upon theoretical objections to a system built of the solid stone and lime of fact. “Reason,” says Anchillon, “knows neither useful, nor dangerous truths. What is, is; there is no compromising with *this* principle. It is the only answer we need make; and to those who, subjecting every thing to utility, ask, What is this good for? and to those who, always yielding to their fears, inquire, Whither will this lead? Jesus, the son of Sirach, has already said, ‘We must not say what good will this do? for the use of every thing will be found in its season, *but we cannot abuse the truth.*’”

CHAPTER II.

Advantages of Phrenology.

WHILE the investigation of every section of science must conduce to social advantage, the order of precedence may properly be determined by the practical and present benefits which a special department of truth promises to the inquirer. It is certain, that all facts are important, and our acquaintance with them necessary; because they are the laws of God, the obedience to which constitutes happiness—and to be obeyed, they must first be known. On this account is it, that we have been anxious to place the objections to Phrenology upon a basis which logic may fairly appreciate, and to demonstrate the irrelevancy of all reasons for its rejection, founded upon any argument but that of fact and observation. But the order of inquiry after truth, may unquestionably much facilitate the rapidity and extent of its acquisition; and by an elucidation of some of the leading advantages which may be expected from a study of the science, we may be enabled to establish its claims to take rank in the van of public attention, by demonstrating that it is a key to the portals of the temple of philosophy, without the employment of which many of its fairest apartments must remain without inspection, like that neglected chamber in the fortress of our Metropolis, which, when at last opened to antiquarian curiosity, was found to enclose the richest jewels and fairest emblems of Scottish royalty and power. We are not ignorant of the fact, that an assembly which has baptised itself *the British Association for the promotion of Science*, and which establishes its pretensions to the character which its name denotes, principally by annual displays of



Julius Caesar

Combateness and Audacity large



Kleber

Audacity very large

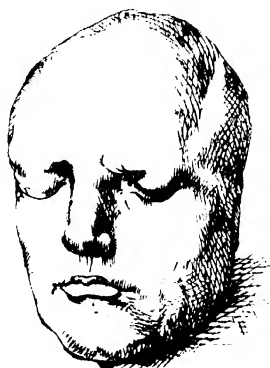


Revd E. Irving

Veneration its natural language Self-love very large Veneration moderate

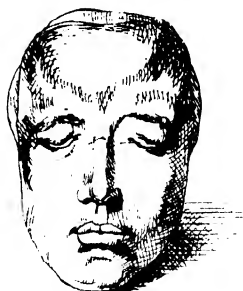


Revd Robt Montgomery



Dr Chalmers

Constructiveness and Ideality large



John Thomson Esq

Professor of Music Taste enormous

gard his commands; and the actions of an Atheist must be altogether indifferent. Is this sound philosophy? Let us investigate the conclusions to which it leads. With reverence be it spoken, God is, in this respect, the only Atheist in the universe! He has no deity whose commands he is to obey—no lawgiver whose statutes he has to observe—no sovereign whose will is to be his law. He is original, underived, omnipotent, eternal. Is he the fountain of virtue—the source of truth—the mirror of purity? Is he a moral agent? If Dr. Chalmers and Archdeacon Paley are right, he seems to us not to be so. His actions are not the result of the commands of another, but of his own nature. He is just; not because there is a command to be so, but because it is his essence. His thoughts are pure; not because there is a law of purity, but because it is the very condition of his existence. He is good, without any shadow of cruelty or hatred; not because there is a canon of benevolence, but because benevolence is the very source and centre of his being. Hence that expression, which might alone prove the divine origin of Scripture, not that God *has* love, but that he *is* love. What, then, constitutes the frame and staple of his moral character? Simply the scope and tendency of his whole being towards benevolence, justice, purity, and truth, for their own sake, and in their own nature. But what do we mean by these terms when applied to the Deity? What is the import of these words in such a case? Unless, independently of our conceptions of his character and existence even, we had possessed the sentiments which these names denote, there can be nothing more clear, than that to tell us, he was distinguished by such attributes, would only be informing us, that he was regulated by certain cabalistic terms, of which we had no conception, and which it would be impossible, in pursuance of the express Scriptural injunction, to imitate. When we are told, that God so loved the world, that he gave his Son for it, how could we comprehend the meaning of the general term “love,” unless we had ourselves experienced the very same feeling. When, in the oracles of the Almighty, we are informed that he is a just God, what sense would there be, with reference to our understandings, in such an epithet, unless it were not new to our sentiments and feelings; but, on the contrary, were a word, the force and effect of which we fully comprehended from the internal sympathies of our own hearts. Why is the Bible not addressed to lions, and tigers, and wolves? Because they do not comprehend the meaning of what it conveys. Why does it appeal to man? Because he understands the precepts contained in it, in exactly the same sense as God who delivered them, except which mutual convention of sense, its appeals to man would be as absurd, because unintelligible, as if presented to a lynx or a hyena. Benevolence, justice, mercy, truth, are, as we all know, abstract terms; and abstract terms, every metaphysician is aware, are made up of the classification of particular emotions, sentiments, actions, or phenomena, which possess a resemblance to each other. Thus, observing that after a certain time the bodies of all men were pulverised, and their minds unconscious, the individual cases wherein they resembled each other in these particulars, were abstracted into the general term, Death—of which we have no other conception than the phenomena presented in the individual examples, whose mutual resemblance suggested the classification. Thus, the term Benevolence, arises out of a collection of single instances, resembling each other in the emotions which produced the corresponding actions—a similarity in wishing well and doing good, for the purpose of promoting happiness. “In nature,” says Brown, “there are no classes. There are only particular actions, more or less beneficial or injurious. But we cannot consider these particular actions long, without discovering in them, as in any other number of objects that may be considered by us at the same time, certain relations of analogy, or resemblance of some sort, in consequence of which we class them together, and form for the whole class one comprehensive name. Such are the generic words justice, injustice, benevolence, malevolence. To these generic words, which, if distinguished from the number of separate actions denoted by them, are mere words invented by ourselves, we gradually, from the influence of association in the feelings that have attended the particular cases to which the same name has been applied, attach one mixed notion, a sort of compound or modified whole, of the various feelings which the actions separately would have excited.” The proposition, therefore, so much in favour with modern evangelical divines, that the conceptions which exist in the mind of God, of justice, mercy, or truth, are totally opposed to those entertained by his rational creation, and that what man may think cruel, vindictive, and capricious, He may view as benevolent, impartial, and



Sir Walter Scott

*Character, enormous Benevolence. Wonder
imitation large*



William Wilberforce Esq MP.

Benevolence. Imitation. Wonder very large



Captain Cook

*Preceptor, faculties particularly localize
very large*



Lagrange

Locality and Number very large



Sterne

The finger resting upon Cupid is Wit-Large. Imitation of faculties large. Wonder of good



Lord Lyndhurst

In the lower animals, the contrast in breadth of head above the ears, betwixt the hare and game-cock, the greyhound and bull-dog, is very apparent. The horse likes to follow the hounds, only if he be running against others. He only races with spirit when he has a competitor; he is fond of war; the bugle makes him prance and shed his crest.

A reference to the heads exhibited under Amativeness, will show the contrast of this organ in large and small endowment. The extension backward from the tip of the ear in each is very different.

The organ is established.

SECTION II.—Organ VI. Destructiveness.

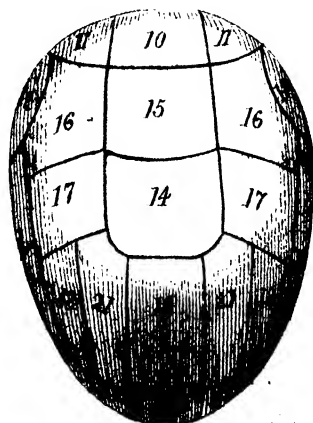
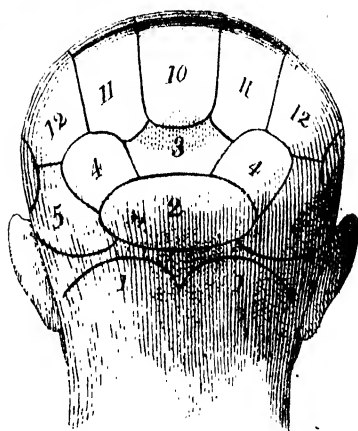
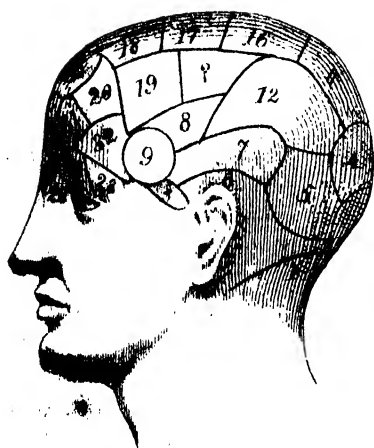
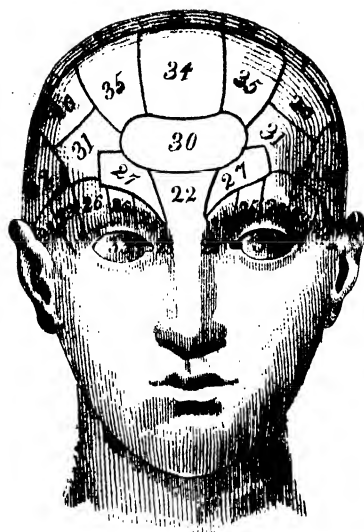
THE organ of Destructiveness is situated immediately above the orifice of each ear. The upper part of the flap or outer fringe of the ear covers a portion of the organ, which runs a little backwards and forwards from this fringe horizontally. It rises a very little way above this appendage, and is situated immediately below the organ of Secretiveness. The breadth of the head betwixt the two hemispheres of this organ, at each side of the head, extending outward, as taken by the callipers, is a good test of its size. If, in a head of $22\frac{1}{2}$ inches in circumference, it measure six inches at this part, straight through the head, the organ is in considerable endowment. It is also to be observed, that the extension of the organ downward, is another index of size. If the hole of the ear be considerably below a line drawn horizontally from the external angle of the eyebrow backward, then is the organ to be considered proportionally larger.

This is one of those organs, the ultimate function of which has not even been approached, and about which Phrenologists entertain all varieties of opinion.

While Dr. Gall termed it the carnivorous instinct, he granted that one of its manifestations was that of anger and fury; and we have but to turn to the bull, the stallion, the wild boar, the elephant, or the rhinoceros, to see that creatures which never taste animal food, can be dreadfully angry and ferocious. He also called it the organ of murder, or of killing, and that, too, in the very same dissertation in which he remarks, that it is large in all incendiaries, who often never kill at all. Dr. Spurzheim remarked, that Gall had named the organ by the abuse of its function, and that the proper office of the faculty was to produce the desire of destroying. But one may be extremely enraged without wishing to destroy—nay, much angered when it is discovered that something is injured. Drs. Vimont and Broussais seem to be of opinion, that the granivorous or herbivorous taste exists with a low endowment of Alimentiveness, and the carnivorous with a high development of that organ, which being contiguous to Destructiveness, may have misled Dr. Gall to suppose the latter to be the carnivorous instinct. They hold that the organ of Destructiveness has for its function the desire of detaching, dismembering, taking to pieces, manifested in *herbivori*, by disengaging the grass from the ground; and that in *carnivori*, the desire for flesh is created by higher Alimentiveness, the act of killing, or torturing, being only a different mode of dismembering, and evidence of no higher Destructiveness. Mr. Robert Cox, in several very interesting and ingenious papers in the Phrenological Journal, has endeavoured to show that Destructiveness is the effect of a disagreeable affection of all the faculties, while Benevolence is their agreeable state; or, in other words, that the former is roused whenever any organs are disappointed, and the latter, when they are gratified.

The real difficulty presented by Destructiveness, is not the nature of its phenomena, for about that all are agreed, but its ultimate function. The endeavour of the metaphysician ought, in the first place, to be, to discover such a definition of the faculty as will embrace all its modes of activity, and from this general term to proceed to simplify still further. No one doubts, that anger, malice, and all uncharitableness, are, somehow or other, connected with this organ; but the proper question for solution is, truly, in what particular do all the phenomena agree?

Phrenologists have, in their love of hypothesis on the one hand, and of empiricism on the other, forgotten to settle steadily in their minds some leading doctrines of the science, which are fatal to the validity of many of their opinions, even where no further advance is made in the investigation of their analyses. If Mr. Combe be



THE
PRINCIPLES
OF
PHRENOLOGY.

BY
SIDNEY SMITH.

Second Edition.

INCLUDING A PRELIMINARY CHAPTER ON THE PUNISHMENT OF DEATH,
AND THE DOCTRINE OF MORAL NECESSITY.

“An intelligent being who should thoroughly comprehend the mechanism of the Brain, and should see in its minutest detail all that is going on within it, would read as it were in a book. The prodigious number of organs, infinitely small, appropriated to sentiment and to thought, would to such a being, what printing types are to us. We turn over the leaves of a book, we study them: this intelligent being would study nothing but brains.”—BONNET.

LONDON:
[JOHN KENDRICK, 4, CHARLOTTE ROW, MANSION HOUSE.

1849.

PREFACE.

THE following Treatise owes its origin to the conviction that there was both room and need for it.

The only works which even pretend to give more than a mere outline, or grammar of Phrenology, offer to the public an account of the most popular of all sciences at the most anti-popular of all prices. The Author has endeavoured to furnish ample details of the theory of mind and morals, which forms the subject of this digest, at a cost which will render it accessible to the great body of the people.

Phrenology has left the discoveries of its original expounders at a great distance behind. The Institutes of Gall and Spurzheim, excellent as in many respects they are, have now become almost obsolete. Mr. Combe's System contains an admirable exposition of the present state of the science; but as his views differ materially from those of many, and as his doctrines, both relative to the function of the organs and the applications of the principles of this new philosophy, were supposed to be liable to numerous and grave objections, the writer of this work was induced to undertake it for the double purpose of expounding his own opinions of the analysis of the faculties, and of exposing what he conceives to be the errors of others. That he himself has escaped from falling into many, he does not venture to hope—that he will be blamed for more than he has committed, he feels too well assured. But if he shall have succeeded in rendering *a competent knowledge* of the science more easily attainable, in exciting a healthy spirit of free inquiry, and, above all, in stimulating others to a more careful investigation of, and to fresh discoveries in, that most defective of all departments of Phrenology, its metaphysics, he shall rest satisfied that he has not written in vain.

The task of collecting the errors, graphical and typographical, which may be found in this work, will no doubt be gladly undertaken by the critics of commas, the semicolon reviewers, the hunters of tautologies, and editors syntactic and rhetorical. It is hoped, that in conferring upon them the distinction of executing the duties of such an office, they will believe that it is intended to manifest towards them only the most substantial proofs of esteem and affection, for it may be remembered, that Boaz first indicated his attachment for Ruth by directing the reapers to make a slovenly stubble, in order that there might be the more for the poor gleaner to gather. If their *ruthless* strictures should prove the inaptitude of the comparison, authors will learn, when next they cut their harvest, to leave fewer stray ears among their sheaves.

EDINBURGH, 16th June, 1838.



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portant considerations ; it starts questions of such infinite significance ; it opens such a volume of phrenological instruction, that we gladly seize the opportunity which its acquisition presents of once more pressing the study of the science which it so wonderfully corroborates upon the consideration of the intelligent public.

The text for our homily will be found in the diagrams of the cast of James Blomfield Rush, taken at Norwich immediately after his execution, under the directions of Mr. John Donovan, to whose public spirit and scientific zeal the community is much indebted for this and many other contributions to the illustration of phrenology.

The measurements of the cranium of the criminal, and of the development of each organ, have been made and carefully revised by the author.

It will be afterwards seen that the average circumference of the English male head is 21 inches ; that of Rush is, therefore, much above the ordinary size, indicating a large mass of brain, calculated, according to the doctrine, that size is the measure of power, to impart to its possessor weight and force of character, and a self consciousness that he should overbear what opposed his will. Accordingly, it will be seen by the narrative of his life, given in the *Norfolk News* and other publications, that he was a leader among his schoolfellows, that in spite of the unfavourable circumstances of his birth, his stepfather adopted him, that at a very early age he was master of a farm, and established a social influence which made him the accepted suitor of the daughter of a gentleman of some standing in his neighbourhood—that in spite of a very bad moral reputation, and a strong suspicion of having been an incendiary, he became the chief land agent, auctioneer, and steward in his district—that the “ Rev. G. Preston placed great confidence in him, and often sought his advice in important business matters”—and that he established over his victim, a judge and a squire, a degree of influence which appears never to have been shaken off to the last, so that he even advanced him money to enable him to retain a property which he was anxious to acquire for himself. It is also stated that he obtained “ a magical influence over his sister-in-law, and supplanted her own brothers in her confidence.”

But although size is the measure of power, it depends altogether upon the direction in which the size manifests itself, what shall be the tendency of that power. The highest order of heads are those where the direction of the brain is to rise upward from the eyebrow to the crown of the head—the lowest are those where the brain falls from the front towards the back. It will be seen that a straight horizontal line drawn from the outer corner of Rush's eyebrow to the back of the head, leaves the *meatus auditorius* (the hole of the ear), which is at the base of the brain, so far below the line, that it is not intersected by the highest point even of the aural fringe, and that the quantity of brain, above that line, is comparatively, to the average of heads, very small. Where the brain above this line is much greater in quantity than it is below, the individual's moral and sentimental impulses will be great, and his animal tendencies weak. Where it is in great quantity below, and not proportionably large above, he will give loose to the lowest animal passions—where it is in considerable amount both below and above, an energetic, forceful, but well regulated character, may be expected with strong passions well directed. The owner of such a head as Rush's, could not be otherwise than a sensual, vicious, grovelling animal, little sensible to the dictates of any pure or honourable principle ; and with such a mass of brain appropriated to such propensities, he could not fail to attain a bad eminence even amongst the most criminal. “ The head,” says Eliza Chestney, in her evidence “ was flat on the top, and the hair was bushy at the sides.” The moral region of the coronal surface was therefore wretchedly deficient, and in the head to which this cast belongs, the better sentiments are in such inferior relative development, and the basilar region is so large and deep, that the owner was almost in a literal sense a moral idiot.

Where the breadth of the head, and its depth, below the angle of the eyebrow, are great in comparison to its height and length, it indicates an inordinate predominance of the passions, whose organs are situated in the lateral portions of the brain. It will be seen that Rush's head was not only very low and flat at the coronal surface, but also far beyond the average breadth. The average breadth at the Destructiveness in the English male head is 5½ inches. In this head it extended to the enormous breadth of 6½ inches, being greater than that of the average of murderer's heads to be found in our collections.

Amativeness is here enormous, and Rush was a wholesale seducer. Secretiveness and Constructiveness are very large, and he pursued his plans of seduction, forgery, fraud, and murder, through a long intricate train ; while fair observing faculties, and small proportionate reflection, with very deficient Cautiousness and large Combativeness, made him apt and dexterous in details, an unerring shot (large Weight and Size), a stranger to fear, or calculation of consequences, and totally free from nervousness, hesitation, or prudence, reckless of character, violent, irascible, and excited to pertinacity by opposition, without being a man, naturally, of perseverance. Alimentiveness is very large, and he gave particular directions, while his life was hanging by a thread, about getting roast pig for dinner ; and called loudly for his supper just after receiving his sentence. Tune is well developed, and Imitation not deficient, and he was a frequenter of concerts and operatic entertainments ; Benevolence is, relatively

to its countervailing passions only, moderate, Conscientiousness rather small, Acquisitiveness very large, and Veneration scarcely average. Incited by a false view of his own best interests, such a man would, with such fearful passions, stop at no crime which stood in the way of the attainment of his ends. Although Philoprogenitiveness, and Adhesiveness are well developed, and we have no doubt he had a sort of brute gregariousness, giving him pleasure in society, and the animal instinct of love for his children and parents; yet his lowest passions are so fearfully predominant, that motive alone would be needed to break down, in such a monster, every suggestion of affection, and to induce him to commit any crime which would rid him of what stood in the way of his own convenience. Accordingly, he was suspected by the insurance office of setting fire to his own premises—seems certainly to have shot his kind and generous stepfather—was currently charged with the murder of his own mother three days before she was to have been examined before the Court of Bankruptcy, when she would probably have been compelled to convict her son of fraudulent bankruptcy, and terminated his dreadful life by the deeds which have made the whole country ring with his name.

Although phrenology, in accordance with the phenomena of human character, recognizes the compatibility of sincere devotion with the co-existence of the greatest depravity, as evidenced in the history of Louis XI., the Italian bravo, and many religious enthusiasts, she does not find in the head of Rush any evidences of deep religious feeling. Wonder, Secretiveness, and Love of Approbation (on one side), are fairly developed, and in one who bore about with him, in his secret breast, the consciousness of having pursued a terrible career of vice, a sort of superstitious hope of whitewashing his conscience, may have combined with a desire to stand well with a quiet, pious, country neighbourhood, and with his employers, to induce the manifestation of occasional fits of church going and bible reading, especially as he appears to have possessed, in full force, the animal instinct of love for his children.

His large Acquisitiveness made him naturally grasping, and money hunting in his habits, while his whole crimes were an elaborate plan for gratifying that propensity. That he was not parsimonious, as well as avaricious, is attributable to the absence of Caution, which could not save what avarice grasped, to the mastery of sensuality over him, to Love of Approbation, relishing show and ornament, and to a temperament in which the brute forces were so predominant, the moral attractions, and sentimental affections so weak, the reflective powers so shallow, and the Organ of Firmness, afforded so scantily the faculty of sustained attention and continuous application to business, that there was presented no object of pleasurable occupation except the pursuit of vice. Imitation, Wonder, Tune, and the perceptive faculties are in fair development, and combined with powerful Secretiveness and fair Love of Approbation, appear to have afforded him a somewhat insinuating external manner, and a taste for theatrical and musical entertainments.

The Organ of the Love of Life is large, and combined with small Cautiousness, rather large Hope, and large Combativeness, may have sustained him in his trial, and induced him to cling to the expectation of a reprieve to the last. His studied acting to the end, his careful attention to his dress, on the scaffold, from the spotless collar to the patent leather boots, are all of a piece. His management of his trial displayed the secretiveness which suspected every lawyer, the want of Caution, which preserved in him an inability to realise to his own mind the consequences of his situation, active perception in his quick memory of all discrepancies of evidence, and the limited intellect which was manifest throughout.

One of the means of identification elicited on the trial, was the observation that the murderer carried his head on one side, and that this was a habit with Rush. The cast indicates this irregularity, the back part of the head being very unsymmetrical, twisted from the right towards the left, and much more fully developed on the left than the right side. This want of symmetry, which is synonymous with malformation, is very common in criminals, and seems to produce alternations of conduct and contraries of character, oscillating between violence and placidity, producing by fits and starts, restraint and indulgence, cunning and rashness, recklessness and momentary regret. It was the remark of his neighbours long ago, that he never could look any body straight in the face, and that he had a "down look" about him of specious cunning and plausible chicanery.

It is impossible to contemplate the circumstances of this extraordinary case without being struck with the suggestion, that society should be provided with some better method of reading human character, than in the final result of its actions. Do not reason, humanity, religion, all lead to the conclusion that it was to be anticipated in the arrangements of a wise providence, that nature should have placed within the power of mankind, some means of making society aware of the tendencies and character of its members? Would it not be better, both for the individual and for those in the midst of whom he lives, if he could be made to know himself, and they to know him? Had society been practically phrenological, this unhappy wretch could never have forged, cheated, seduced, and murdered. He would have been pitied as we pity the lunatic or the idiot, (he was morally an idiot, and in his passions a madman), but shunned, watched perhaps, restrained, and placed beyond temptation by never being trusted. He would never have been permitted to continue from youth till death to spread

ruin, vice, misery, sorrow, and murder, broad cast over society. He, himself, would have known the monster that he was, and thus have attained the first step in making himself better, and in avoiding the sins which most easily beset him.

The case illustrates also the solution of another question. Mistaken philanthropy urges the abolition of the punishment of death. Of such a criminal as Rush, with a scarcely appreciable conscience, and capable only in a feeble degree of moral intuitions, the only restraint upon the actions consisted in raising up *external motives*. We kill a mad dog, a rattle-snake, a tiger; why should we spare an infinitely more noxious animal? Nature itself tells every one's own conscience, that there is nothing which is regarded with so much horror as being crushed out of existence. The fear of death is the very strongest motive which can control human action.

"For who to dumb forgetfulness a prey,
This pleasing anxious being e'er resign'd,
Left the warm precincts of the cheerful day,
Nor left one longing lingering look behind?"

No philosophical reasoning, no mere tables of statistics, no arrays of criminal returns can refute that proposition. The impression made upon society by the details of the last days and final execution of Rush, thrilled through the soul till it sickened. The instruments and ceremony of death were most properly made ostentatiously public—and we have but to appeal to the individual consciousness of each man for himself, whether any punishment whatever is half so horrible and moving as death upon the scaffold.

"Aye, but to die, and go we know not where—
To lie in cold obstruction, and to rot,
This sensible warm motion to become
A kneaded clod—and the delighted spirit
To bathe in fiery floods, or to reside
In thrilling regions of thick ribbed ice,
To be imprison'd in the viewless winds,
And blown with restless violence round about
The pendant world—'tis too horrible!
The weariest, and most loathed worldly life,
That age, ache, penury, and imprisonment,
Can heap on nature, is a paradise,
To what we fear of death!"

Could we indeed bring ourselves to accept the popular doctrine, that an everlasting futurity will be determined by the past—that as the tree falls so it shall *for ever lie*—that the poor frail wretch who shivers through life's fitful fever, clothed in a nature which was not fashioned by him, but made for him, that this ignorant, short sighted, fallen creature should be made immortal, only that his sufferings may know no end in duration, and find no bottom to the depth of their intensity—and that by a few cabalistic words, uttered by a priest, a long life of depravity and crime, could be changed, in a month, into a purified soul of serene beatitude, if but time were given for repentance and the gestation of the new birth, then, indeed, no words could express our sense of the cruelty of depriving, by the hangman, the unhappy victim of this chance of what is called salvation. We never believed that depravity could skip from the gallows to heaven. We call to mind the golden words of him, who said, "Behold! the kingdom of heaven is within you," and that if *nemo repente fuit turpissimus*, so no innately bad man can by a short course of catechism and ghostly comfort, be converted into an immaculate saint. Phrenology, in common with nature, teaches us that every man possesses, in various proportions of development and activity, every faculty which is common to all, and that the most depraved possesses the same susceptibility of ultimate progress and excellence, which is realised in the present life of the best of us. "Marat had a mother that loved him, was once swathed in baby clothes, and slumbered sweetly in a cradle like the rest of us." Burns hopes that even Satan may one day be spared an odd corner in paradise, and Hamlet confesses to more sins of thought and conception than the worst that were ever perpetrated by the most criminal.—"I am myself indifferent, honest, but yet, I could accuse me of such things that it were better my mother had not borne me: I am very proud, revengeful, ambitious; with more offences at my back, than I have thoughts to put them in, imagination to give them shape, or time to act them in." Rush has gone to his last reckoning without confession, repentance, or perhaps even compunction. But he bears with him, dead indeed, or dormant, "the organs, dimensions, senses, affections, passions," the capabilities for good, the susceptibilities of virtue, which are found only in higher development in the best of us. He too is never to die. He cannot escape through the hangman's rope from the miseries of a depraved nature, a career of atrocious crime, and a life of sensual indulgence. For every idle word, for every vicious thought, for every vile action, he must still give an account. We are all made to abide the consequences of our errors and our vices. The miseries of sin here, and hereafter, are the schoolmasters of virtue. God and Nature have affixed to every thought and act, their invariable and inexorable consequences. They never forgive, because pardon would be the with-

drawal of the very correctives of wrong doing. They never fail to reward the good men do, because the happiness which is the consequent, is also the exponent of the superior excellences of virtue. It was not intended that we should be even merely moral. The design of providence evidently is, that we shall also be intelligent. If physical misery is the result of our neglect or ignorance of those physical laws which we have been endowed with faculties to comprehend, it is only to compel us to acquire a knowledge of, and to observe them. If we are all made to suffer from social disorder, political oppression, or the disregard of the public duties we owe to one another, it is not to punish us vindictively, but to demonstrate the advantages of the observance of the requisitions of social incumbency, by giving prominence to the evils of their infringement. Bad men are internally conscious of dissatisfaction and unhappiness, that they may be made better by longing for that sunshine of the mind, and peaceful tranquillity, which never desert the truthful and the good. The liar is distrusted, and the thief proscribed, that it may be proved to them that honesty is the best policy, and that eventually, virtue is always its own reward. To bate one jot or tittle of the punishment due to ignorance and vice, or in other words, to interrupt in any degree, that wise order of causation, which invariably places offence and retribution in the relation of antecedent and consequent, would be but to retard human progress, and impede the application of the indispensable conditions of happiness and improvement. Even "the greatest one that e'er wore earth about him," was only "made perfect through suffering."

What is the chief evidence of the immortality of the human soul, if it be not that man alone, of all animals, is demonstratively capable of progression? The bee that hummed its busy hour through the bowers of paradise fashioned its hexagon with the same mathematical precision which it does now and here. Six thousand years have added nothing to the sagacity of the horse or the intelligence of the dog. But man begins a fireworshipper, and rises to a Newton—first tempts the river on a fragment of bark, and then crosses the Atlantic in a steamer—burrows in the earth and then builds London, takes weeks to send messages on sticks to Montezuma from the coast, and at last reports in London speeches delivered in Edinburgh ten minutes before—begins a cannibal or a Cumanchee, and ends a Howard, a Franklin, or a Channing. To what end shall the progressive become immortal, except that the good may have time to become better, and the bad to become good? It is no longer a matter of doubt, that by natural generation, God "visits the sins of the fathers on the children even unto the third and fourth generation, and shows mercy unto thousands that love Him and keep his commandments."

Our own consent was not asked to bring us into the world. We did not make the circumstances by which we were surrounded in infancy, youth, and manhood. The bag that is empty, how hard it is to stand upright, yet it cannot fill itself. If our parents by precept, by example, by a wise providence, did their duty by our inner soul and outward conditions, what merit is ours? If they did not, are the consequences of their neglect the less visited upon us? If of two persons placed in exactly the same circumstances, one becomes virtuous and the other vicious, does it not follow that the discrepancy must arise from their diverse *natures*, or, in other words, the tendencies with which they were born? If the contrast was the result of conditions which, although ostensibly similar, must really have been diverse, then was it not the *conditions*, and not the men, that made their lives different? If the one resisted the unfavourable conditions, and the other was overwhelmed by them, how *can* the variance be accounted for except by the admission of original diversities in mental and moral constitution, which were created in, and not formed by us? We cannot will our motives, because motives determine the direction of the will. When we make choice of one line of action rather than another, we mean no more than this, that on the impassive battle ground of man's soul, one set of motives have been too strong for another set, and that our determination is guided by a perception according to our lights of the consequences of yielding to the good and resisting the bad. Where internal motives to virtue are too weak to restrain vice, external agencies must be applied; the terror of the constable to deter the thief; horror of the hangman to protect society from murder. Where the love of good fails to lead to righteousness, the fear of misery is the necessary bridle of the wicked.

It has indeed been contended that this is Fatalism dimly disguised. Even Calvinists have been led to denounce these conclusions as a revival of the doctrine of philosophical Necessity. It has been alleged that such principles involve a denial of moral responsibility. A phrenological thief once pleaded the conformation of his cranium as a ground of exemption from punishment. If he had large Acquisitiveness and small Conscientiousness, his motives for larceny but overcame his inducements to be honest. The judge's reply was conclusive; the law ought not and does not punish vindictively, but correctively, to raise up counter motives in the mind of the criminal, and to impress upon the fallible the consequences of vice. The jail, bread and water, and the treadmill, are applied to the thief as the strait-jacket is to the madman, to keep bad motives from taking the shape of action. Punishment depresses the propensities and stimulates Cautionness, while detection and exposure alarm Love of Approbation, Secretiveness, and Self-Esteem. The depression of the animal propensities which results

from imprisonment, low diet, and hard labour, is favourable to the introduction of considerations addressed to the moral sentiments, and prison discipline becomes strictly phrenological if wisely applied.

We assert that we are the only true disciples of the doctrine, if not of what is called moral responsibility, certainly of that which alone strictly deserves the name of moral accountability. We maintain that every sin bears its own suffering, and every worthy deed brings its own gratification. We say there is no remission of the consequences of the one, while the rewards of the other are never withheld. As there can be no amendment without correction, so pardon could only mean a withdrawal of the very instrumentalities which the whole history of the moral government of the universe demonstrates that its ruler has devised for recommending obedience to his statutes, and raising inducements to avoid their infringement. "A knave," says Coleridge, "is but a fool with a circumdendibus." The calamities which follow wickedness are our natural moral instructors. Codes of morals are not written literally on the sky, or uttered categorically through the thunder amidst lightnings. Order, truth, kindness, honour, veneration, purity, peace, the liberal hand and open heart, are stamped with the approbation of God, only by their accordance with the fitness of things, the economy of society, and our physical organism, the happiness they secure, the misery they escape. "The invisible things of Him, from the creation of the world, are clearly seen, being understood by the things that are made;" even Scripture coming recommended to our acceptance by its accordance with the moral dispensation we already see around us.

It may indeed be demanded how can there be free will if motives are not within our own power; and if the will be not free, how can there be responsibility; and if there be no sense of accountability, where is the justice of punishment? This is to shut our eyes to the actual dealings of providence. All of us suffer the consequences of that for which we are not accountable. Of bad example, neglected education, unfavourable social circumstances, domestic misfortune, hereditary disease which we have never caused, we nevertheless must abide the consequences.—"Who did sin, this man or his parents, that he was born blind? And Jesus answered, Neither hath this man sinned nor his parents." Is it the fault of the cannibal that he never heard the gospel, or any merit of the Christian that he never was a cannibal? "Who maketh thee to differ from another? and what hast thou that thou didst not receive? now, if thou didst receive it, why dost thou glory as if thou hadst not received it?" It ought to be with every one the strongest motive to good conduct, that the consequences of his actions neither stop with him nor with them. It ought to be with all a chief incentive to public and social duty that the crime and vice of individuals recoil upon society. There is no injustice in retribution, whose only object is correction. The infliction of pain is not the end of punishment, but only the means of moral discipline. It is not to make us suffer, but to make us better that misery follows sin; and castigation, which curiously enough is derived from the Latin word *chaste*, or purified, would be wholly indefensible had it any other object than repentance, conversion, and newness of life. It is indeed speciously urged, that if a man believes that he cannot help his actions, he will not be induced to mend his ways; but we have already demonstrated that the motives to virtue are to be found in its own reward, and in the consequences of vice—and that the practice of morality is much more effectually encouraged by inducing the conviction that every sin will meet with infallible retribution, than by propagating the belief that pardon, forgiveness, and remission of sins, will make a short cut to heaven unclogged by the conditions of retributive reformation, and the discipline of suffering.

"God rest all Christian souls! We know what we are; we know not what we may be." The victims of inferior cerebral organization, of the neglect of society, of ignorance and of social circumstances, criminals are to be viewed "more in sorrow than in anger." Even the worst of them has all eternity to live through, and infinite duration to produce progressive amendment. If punishment in the next world were everlasting, and inflicted with no view to amendment, to what end is it imposed? not as a warning to the saved, they are already beyond the risk of falling aside—not as an example to the damned, for the very hypothesis is, that it cannot mend them—not as a corrective to the lost, for to correct them is to make them better, and if made better, then they must have progressed, and if progressed, then they are capable of improvement; and if improved, why are they not fit for heaven as well as the good, who are already there? For what purpose are the bad made immortal as well as the good, except that through the endless ages of eternity there will be time and room for repentance, amendment, progress in knowledge, and improvement in virtue? To his latest hour the very worst of us has within him the elements of that which, awakened into action, might make him better than the earthly best. Is all this material of excellence to be for ever thrown away, because in the wild whirl of this mad mortality, the nightmare of crime sat upon the breast, where might have slumbered calmly the sweet peaceful dream of virtue? Why, the very pagans thought better of man than that; they regarded his soul as a spark of the Great First Cause, destined for ever to seek, until at last it should be re-joined to, the main spirit of the Ineffable. Shall man's eternal fate be sealed by his passage through the few fitful years of time? It is one of the least obscure laws of God's sublimity providence that it is the very function of pain

to end itself, either in relief of the part, the insensibility of the patient, or the termination of the suffering in death. It is a canon of physiology equally, and of morals, that it is of the nature of order, obedience, observance of law, to perpetuate and preserve being and happiness, and of inordinate desire, lawless indulgence, and disturbance or abuse of function, to terminate themselves in destruction. Pain and vice make an end of themselves here; why should they change their very purpose by enduring hereafter? Who shall draw the line of that spiritual condition which separates perdition from salvation? which shall say to Pythagoras, Zeno, Plato, Socrates, Trajan, Numa, Antoninus, Franklin, Channing, "Come thou here to take your place with Caligula, Nero, Attila, Rush, and the devil," and to Solomon, Alfred, Athanasius, Howard, Calvin, Knox, Cromwell, Cranmer, Clarkson?" Go thou there that Saint Peter may let thee in?" Does Christianity command us to part with our moral intuitions when we take up the gospel, and confound all our sense of natural justice, charity, and benevolence, ere we can comprehend God's dealings with his spiritual creation? Are infinite attributes to make each other finite, and boundless love to be limited by the mandates of inexorable justice? Shall the Creator be omnipotent while he *cannot* forgive; or may he relent while men live, but must be implacable when they die? We are not among those who believe that Colonel Gardiner owed his salvation to frequenting a brothel, and that Sir Mathew Hale would have been lost had he not been dead drunk, and his boon companion drunk dead. It forms no part of our creed that the attainment of heaven is the accident of an accident, dependant on proximity to a camp-meeting or an "awakening preacher," the activity of a city mission or a tract society, or the luck of being carried off in yet unoffending infancy by teething or the small pox. We cannot accept that theory of celestial dispensation which assures us that Rush was consigned to perdition because he did not break his neck, or die of the cholera, while weeping in the odour of religious compunction at the sermons of the Rev. Mr. Andrew. A future state is not an affair of the stop-watch, or strength of constitution, so that crime shall scale the mansions of bliss by the accident of a timely reprieve, or vice shall escape its penalty by such vigour of the physical system as will protract the term of life long enough for leisurely repentance.

No—"All that live must die,
Passing through nature to eternity."

The whole economy of the universe, physical, mental, and moral, is that of gestation, successive stages of being, diversity in degrees of development. Worlds themselves are at first without form and void, shrouded in a brooding darkness. Nebulæ roll on from the cloud of mud and vapour, to a globe of consummate sphere, with a fixed and firmest earth. Every variety of flower, and tree, and herb, is caused by development of a common type, arrested at diverse stages. The scale of the serpent contains the germ of the fin; the fin expands into the webbed foot; the foot into the claw. In the hoof of the elephant can be detected the articulation of the toes; in the second stage the hoof becomes cloven; the cleft rises to the paw; the paw of the dog into the claw of the lion; the claw becomes the delicate prehensile of the monkey, and the prehensile terminates in the human hand. Intellect in like manner has its gradations of gestation. Tiedemann has traced in the fetal human brain first, distinctly perfected, the convolutions of the insect, then of the fish, bird, and beast, separately but successively developed; "until," to use the words of Dr. Gordon, "in the full grown man we behold it possessing some parts of which other animals are destitute, and wanting none which they possess." And so in the moral and spiritual world, we see immortal creatures, in whole races, living on earths, ants, and worms, possessing scarcely the faintest glimmer of the sense of moral incumbency, hardly even the instinct of obedience, with the bare shadow of a grovelling superstition, propitiating their idol by murder as a Thug-worship, rising to obeisance to the sun, going onward to Sheva, the Suttee, or Confutsee, advancing to Mahomet, and reaching to the ten commandments, the Christian precepts, and a Father God. There are whole tribes of men as dead to moral obligation as Rush was. Yet shall the bushman, the New Zealand cannibal, the Thug, or the Algerine or Lascar pirates, never reach the moral attainment of Howard, which Howard by this time has far outstripped? "There is a glory of the sun, a glory of the moon, another of the stars—

"He hath made all beautiful in their time."

"Are not twelve sparrows sold for a farthing, yet not one falleth to the ground without your heavenly Father. How much more precious are ye than many sparrows?" There is an infinite significance in a human soul, which was never meant to be the mere sport of sublunary contingences, of the trivial accidents of this short life-span, of the cast of the die of example, condition, hereditary tendency, climate, creed, or nation. The desire even to improve our opportunities is dependent upon the suggestion to the mind of motives operating on the will, as little the result of our own agency, as the opportunities to be improved. The neglect to cultivate our advantages is but the result of "a law in our members, warring against the law in our minds," of a willing spirit—and weak flesh—of that mortal frailty, which inspires the confession even of an apostle, "The good I would, I do not—the evil I would not, that I do."

even the fair stars "shoot madly from their spheres," falling athwart the heavens down through God's immensity? Yet are they never lost—arrested by that principle within them, which has its kindred sympathy in some better poised, and order compelling planet, they too, stop their wild wanderings through trackless space, and like repentant prodigals begin slowly to do reverence to the universal harmonies of heaven, and to roll round the master spirit of some celestial system in far off homage to the great architect of all! Shall it be so with stars, and not with souls? May not the frail vessel fall, yet not for ever?

"Though the bark can not be lost,
Yet it shall be tempest tost,"—

on the wild surge of passion, the compass of the conscience perhaps out of gearing, and the rudder of reason, quite unshipped in the fierce hurricane of unchastened sense. But still not lost—still living—still in hope of a lull, a favouring gale, a returning calm, an everlasting haven in the safe roadstead of progress, purity, and peace.

Let then, the murderer die—in mercy to the obdurate and ferocious who survive, and to society which needs protection. To those who are without compassion or compunction, a motive from without, must be found to stay the armed hand, which hears no small still voice within—and what motive so imperious as the love of life?

"Whence this pleasing hope, this strong desire,
This longing after immortality?
Or whence this secret dread and inward horror,
Of falling into nought? Why shrinks the soul,
Back on herself, and startles at destruction."

See how anxiously Rush laboured to save his wretched existence—how he clung to hope to the very last—how he refused confession for the chance of reprieve. Had he been endowed with large Cautiousness, the organ of the Love of Life is in him so strong, that the grim shadow of the gallows might have saved his victims and himself. Transportation, imprisonment, a slave life, and tortures which, not being seen, are not realised by the depraved mind. There are thousands, who if they were assured that they would not be put to death, would not hesitate, by murder, to gratify revenge, or avarice, or lust, for the risk of being banished, or of working in a chain gang. It is right, equally to the ferocious and to the inoffensive, that the wretch who meditates assassination should feel that the prison door closes that of hope and life upon him, and that the magnitude of the greatest crime, should be made enormous in all human eyes, by the stupendous horrors of the retribution. The murderer can be of no more use to himself or to society. He is but a cumberer of the ground. When the sense of natural justice is not outraged by the punishment, there is no call upon society to bear longer the burden of such an existence. Let him die—but not "in the sure and certain hope of a glorious resurrection," or yet in the despair of eternal torments—but in the conviction that a death-bed repentance will neither whitewash his sins nor his soul—that he must yet give an account for the deeds done in the body, whether they be good or evil—that he too can only be made perfect through suffering, and that the depth of his suffering will be according to the measure of his imperfections. The instinct which makes the humane recoil from the spectacle of an extinguished life, is but an additional security to society for its safety, and intensifies the majesty of outraged law, and the solemnity of retribution. There is far more real torture in the horrors of transportation; and the necessary peremptory tyranny which iron-binds the convict, annihilates his freedom, and subjects him to the sternest and most abject subjection to the overseers of his slavery, is in reality far more calculated to outrage our sense of reverence for our own nature, and the feeling of self respect in the criminal, than the short tragedy of the gallows.

But while the necessities of the social economy demand that life should be surrounded with every protection which it is in the power of motive to suggest, and of legislation to enforce, they also plead the claims of humanity to every effort, appliance, and instrumentality, which is calculated to surround it with incentives to virtue, with motives to the practice of right, purity, and truth, with a knowledge of the resources, and excellences of goodness, and with the means of avoiding temptation, and eschewing vice.—God set his mark on Cain.—He has set his mark on all—the good, the facile, and the bad. When the intuitions of conscience can tell the depraved nothing of his degradation, he has still perception and reflection. Had phrenology been a faith among us, the form of the head would have taught Rush that of which his heart gave him little intimation, his fearful tendencies, his grovelling sensuality, the precipice on which he stood—the danger of his passions—the necessity for flying from temptation, and avoiding by seclusion, or by flight to some wilderness, the solicitation of vices which he could not withstand. His wife, his sister-in-law, the numerous victims of his acts, would have read on his head what his Secretiveness successfully concealed in his character, the treacherous, artful, remorseless libertine, and would have avoided him as a pestilence. Society would have seen his large Acquisitiveness, and his small Conscientiousness, and withheld that trust which was systematically broken by cunning, legal chicanery, and fraudulent bankruptcy. In fact, he was but a wild beast uncaged, and a madman with just cunning enough to conceal

his insanity. His parents would in his cradle have read his character, and all would have conspired to put him in that course of training which might castigate his passions, chasten his sensuality, awaken thought and conscience, alarm self respect, and stimulate the good that was even in him. If society would have demanded "where is moral responsibility, if actions are shaped by organic structure?" it would answer itself by the reflection that all sentient creation is made accountable for action by consequences—the bird perishes at sea if it stray too far from land—the hart from thirst, if it leave the water brook too far behind it—the lamb from the kite, if it wanders from the ewe—the sailor from shipwreck, if he loses his reckoning and his chart—the son, from the father drunkard—the daughter from the mother's frailty—the aggregated nation from the unrighteousness of its subjects—society, as a whole, from the ignorance, vice, neglect of its members. We are all *made* accountable for the consequences of the transgression of each—and each has a direct interest in the education, the elevation of the moral standard, the virtue, the happiness, of all. Call this injustice, it is nevertheless obviously God's method of dealing with us. That it is the dictate, not of inscrutable but demonstrable wisdom, and of not obscure, but obvious although far sighted and comprehensive love, is to us entirely obvious. He made us not for ourselves but for each other, self sacrifice to be our highest virtue, universal kindness the chief good, progressive intelligence the instrument of enlarging capacities for enjoyment. If he has made suffering the school of virtue, and therefore the condition of perfectibility, we have but reverently to bow to the chastenings which make us wiser and better, and thankfully to accept the terms on which troubles of this life are made to work out the enjoyment of the Great Hereafter,

DEVELOPMENT OF THE HEAD OF RUSH.

PROPENSITIES.

1. Amativeness, excessively large.
2. Philoprogenitiveness, very large.
3. Concentrativeness, rather large.
4. Adhesiveness, rather large.
5. Combativeness, large.
6. Destructiveness, very large.
7. Secretiveness, large.
8. Acquisitiveness, large.
9. Constructiveness, large.
10. Alimentiveness, very large.

SENTIMENTS.

11. Self Esteem, full.
12. Love of Approbation, full, or rather large.
13. Caution, small.
14. Benevolence, rather full.
15. Veneration, full.
16. Firmness, rather full.
17. Conscientiousness, small.
18. Hope, large.
19. Wonder, full.

20. Ideality, small.
21. Mirthfulness, rather full.
22. Imitation, full.

PERCEPTIVE FACULTIES.

23. Individuality, full.
24. Form, rather large.
25. Size, rather large.
26. Weight, large.
27. Colour, full.
28. Locality, rather large.
29. Number, rather full.
30. Order, rather full.
31. Eventuality, rather full.
32. Time, full.
33. Tune, full, or rather large.
34. Language, full.

REFLECTIVE FACULTIES.

35. Comparison, rather full.
36. Causality, rather full.

MEASUREMENTS.

	INCHES.		INCHES.
Greatest Horizontal Circumference	24½	From the hole of the ear to the level of the external angle of the eyebrow	24
(Reported to be 23 in living head).		Destructiveness to Destructiveness	64
Circumference over the head to hole of each ear	15	Secretiveness to Secretiveness	62
Circumference of Cerebellum to do.	11½	Acquisitiveness to Acquisitiveness	61
Length of head from No. 2 to 22	8½	Constructiveness to Constructiveness	68
Ear to Individuality	52	Cautiousness to Cautiousness	54
Ear to Philoprogenitiveness	52	The basilar region of the head is enormous, and the whole buck part of the head is very much twisted and unsymmetrical, a common feature in criminal heads.	
Ear to Firmness	64		
Ear to Benevolence	68		
(The length of these two last measurements arises from the extraordinary size and depth of the basilar regions.)			

THE

PRINCIPLES OF PHRENOLOGY.

INTRODUCTION.

IN the past history of the world, it is remarkable that theology has always overborne philosophy in political influence, and the power which is derived from conciliating the popular regards. Physicians and *meta*-physicians, the expounders of the laws of matter and of mind, have paled their ineffectual fire before the universal dominion of priests. The authority which "sweet religion" has failed to assert over the human mind, has been ceded to that science which has so often made it a "rhapsody of words;" and the rightful social ascendancy which sincere piety and fervent devotion in vain struggled to vindicate, has been usurped by the professors of that political theosophy, which may everywhere be detected in the width of its lawn sleeves, and the ample latitude of its phylacteries. Why is this? Because worship has hitherto been a trade, and religion a state engine; because the love of truth has been less than the love of prejudice; because the courage of philosophers has been more evanescent than the bold arrogance which has maintained the supremacy of hierarchs. Mankind, in general, have in divinity done what the Chinese have instituted in medicine—made the clergyman alone responsible for the cure of their souls, as the latter make their bodies stand solely at the risk of the physician; seldom presuming, and never with success, even in their own personal case, to interfere with the practice of the privileged corporation of spiritual surgeons. They have looked upon the husbandry of their own immortal destiny, as a matter with which they would as soon have thought it incumbent on them to have any individual interest or concern, as the supercargo who had taken the precaution to get his life insured with a respectable company, would have felt himself called upon to intermeddle with the captain's management of his ship in a perilous gale; and so jealous have the people been of the encroachments of philosophical poachers upon clerical hunting-ground, that they have seconded the efforts of chartered priestcraft, to keep all men in the same state of theological dependence with themselves. Men of the most extensive acquirements and almost universal erudition, are, upon the subject of religion, even more ignorant than the great mass of the common inhabitants of every country; and neither the historian, the statesman, nor the patriot, are conversant, except in the most superficial degree, with the theory of popular theology, or the religious profession and general principles of belief which either prevail in the Church, or justify the various orders of Dissent. The gross ignorance of men of literature on all subjects of this nature is not less unpardonable than deplorable. By universal consent philosophers consider the topic as tabooed; and the enlightened and liberal conductors of the public press, from sheer unacquaintance with the Bible, and incompetency to approach the subject, fearless and honest on all other occasions,

his freedom, and his answer is, not that he is entitled to liberty, but that he has done nothing which is incompatible with the position that he is still a slave. Popular prejudice! What is it? Simply, error, ignorance, falsehood. To offend this prejudice, what is the process? Only the proclamation of truth, knowledge, and honesty. In acquiescing in, or yielding to it, what is implied? To aid, abet, and encourage deception, "omniscience," and cowardly dishonesty. Such a stratagem is unworthy of a philosopher, and incompatible with the far higher character of an honest man. Above all, it offends every principle of philanthropy, because it conceals from the eyes of blind ignorance, that truth and knowledge, which are the only sources of virtue and happiness; nay, makes philosophy a party to the imposture, by flattering superstition into the assurance of the truth of its absurdities.

There are many men who discover that error needs no recommendation, but that truth is a medicine which must be concealed in honey before the public will swallow it. They inform the philanthropist, that if he tell mankind what it really is that he is teaching, they will spurn it; and that, as he is doing the cause of truth a service, by expounding his doctrines, he is quite justified in concealing their real nature, and what he believes to be their practical deductions. They will placidly state, that Phrenology, for example, has enough of prejudice to overcome, without its expounder increasing its force by openly disregarding the religious objections which it encounters, and that, for the very sake of the progress of truth, prejudice ought not to be subverted, if, by any other process, he can procure audience to his principles. This is, soften it as we may, moral swindling, and is directly calculated to retard, instead of assisting, the progress of knowledge. The opponents of Phrenology have not, as in the case of a candid and honest teacher, to attempt its refutation by the standard of truth, but simply to discuss the question of its conformity with received doctrines. The temporising philosopher has, to avoid offending public prejudice, yielded the palm of authority to the dicta of the bigot, and confined himself to an assertion of the harmony of his discoveries with the regnant creed; and the fanatic, in turn, lets the truth or falsehood of his antagonist's theory alone, and tries it by the standard to which he himself has referred the issue of the controversy. Thus, mankind, who are not accustomed to analysis, are convinced that the philosopher's doctrines are not sound, while all the time they are simply not common. All truth is mutually dependent; it is consistent, harmonious, relative. To suppress, or constructively distort one branch of it, is to cripple the stalwart march of the rest. So long as it is inconsistent with popular theology, it must be impeded by assuming or implying that the latter has a solid foundation. If, therefore, it be desired that truth should progress, its disingenuous defender must at last openly disavow what he constructively professed, and the unpalatable nature of his principles must labour under the additional disadvantage of the insincerity of their professor.

It is indeed perfectly true, that resistance to prejudice, and the assertion of liberty of conscience, in speech and action, must produce temporary disadvantages; and it has been correctly asserted, although in very vague and general terms, that entire sincerity must do harm, and that the *premature* (as it has been called) disclosure of strange doctrines to the public, has retarded, rather than accelerated, the progress of knowledge. But the harm here spoken of, is, in sober fact, a mere flourish of rhetoric, to conceal by a generalised mode of expression, the distinction betwixt an injury to truth, and a blow struck at its professor; and the progress thus noticed, is not that of information itself, but of the personal prospects of the expounder of the new philosophy. It is the *man*, not his *principles*, which suffer by his honesty and courage; and this is what every lover of truth and of his kind, must expect to encounter and resolve to brave. Let the first discoverer of a new series of moral principles, consider himself as the individual whose *lot* it is to become the victim of superstition; and let him feel that after deducting all the obloquy, and scorn, and poverty, which will be the consequence of his sincere intrepidity, from the account-current of his life, he has to strike a mighty balance in his favour, of truth discovered, good done, and mankind made better, and to hoard a treasure of satisfaction in his bosom, more precious than the "lust of the flesh and the pride of life." Let him feel that in the army of truth, the lot has fallen on him to lead the forlorn hope, the storming party, which is to encounter the dubious siege of the bristling fortress of superstition; and when he is to be offered up on the altar of bigotry, let him think of the chaplet which crowns his brow, not of the chains which bind his struggles—

let him remember that he is adorned for the sacrifice, and that the incense of his ashes will ascend to heaven; so will he forget that he is dressed for death, and immolated to intolerance. If, indeed, he who makes two blades of grass to grow where only one grew before, be a benefactor of his species, how much greater is he who has planted the rich harvest of truth in the place of the rank weeds of ignorance and error, and engrafted thought upon a mind that would otherwise have been barren of speculation.

These are the premises from which the details of our future conduct may be fairly deduced. We shall speak with perfect sincerity. "*Licet omnes fremant—dicam quod sentio.*" The reader shall be as our bosom friend, or our strong box, the depository of all we hold precious, and of all we know and feel. We shall suppress only what we do not believe, and shall conceal nothing because it may offend. To bigotry, we bid defiance; and on superstition, we look with all the contempt that pity has left us. With the humblest worshipper of truth, we are ready to take our part and lot, and from his side we shall be terrified by neither ridicule nor rags. Yes, our challenge is not an idle one, for *we are not rich enough to be dependent*, nor do we move in a circle so exalted as to make us the slave of its opinions. So long as there is a grade of society below the notice of persecution, and bread and water for hard but honest labour, we fear neither priest nor poverty, nay, not even neglect, obscurity, nor the slow, unmoving finger of jealous scorn. We are fool enough to think that he who can dare to act as he feels, and speak as he thinks, is a greater and richer man than a coward in a carriage, or a hypocrite at a prince's ear; and that there is consolation in the assurance, that although banished from society, or even persecuted by his country, a man has yet the power to retort the sentence, "*I banish you!*" and to feel happy in the consciousness that "there is a world elsewhere." Let not the churchman fear that we will cheat him into heresy, nor the priest suspect that we will *insinuate, implicate, and infer* uncanonical views, and principles that contradict the standards of the church. When we are heterodox, we shall give fair warning, and fair battle also. So long as we hold our own opinion to be as probably correct as that of any other man, we shall not be at all sorry to find that it differs from either the Confession or the Articles—productions, for no part of which we have any peculiar respect, except in so far as they state what is true; and against which, we entertain no prejudice, except where we conceive them to advance what they cannot prove, or confidently assert what is manifestly false.

The secrets of the Confessional being now disclosed to the reader, we proceed to the discharge of our secular duties, with the alacrity which attends the making of a clean breast, and the possession of a clear conscience.

CHAPTER I.

Objections considered—Christianity—Scepticism—Materialism—Fatalism.

THE word "Phrenology" is intended to express the object of the science, which is the philosophy of mind, of which it embraces a new and peculiar hypothesis. Its leading doctrines are, that the mind (in which term are classed all sensations, instincts, appetites, sentiments, and modifications of reason) is manifested by the brain, the former being not single but complex in its action or faculties, and the latter exhibiting a corresponding multiplicity of divisions of organs and functions. It supposes the mind to perform its evolutions through the medium of these cerebral organs; the amount of power possessed by each mental faculty to be modified by, and the result of the size, structure, and quality of these encephalic divisions; and its energy indicated by certain easily distinguished convolutions of the brain, discoverable during life by parallel protuberances on its shield, the skull. It is based altogether upon the observation of a correspondence betwixt cerebral projection and mental manifestations, or absence of developement, and deficiency of relative psychological indications. It has not assumed a single principle—advancing in its career through a process of severe induction, and establishing its doctrines solely by the classification of individual phenomena. Professing to be founded altogether upon fact and observation, it declines the jurisdiction of all other systems, whether metaphysical or theological, and refuses to be tried by the standard of rival hypotheses. It is an induction from existing phenomena, and the libel is irrelevant to infer the pains of refutation, which merely indicts it of contradiction to theory, however plausible, or of opposition to propositions, however skillfully advanced. Facts are its peers, and form the jury by which it clamours to be tried. The laws of nature are those alone to which it owns allegiance, and it will not admit the obligation of any other statutes. As the captain would scout the absurdity of measuring his recruits by their correspondence in height with a drummer who merely alleged that he was the regimental size, while he had at his elbow the metrical standard erected for the purpose of testing their altitude, so would the philosopher who beats up for recruits to join the ranks of knowledge, refuse to try one branch of science by its consonance with another, when both profess to appeal to the common gauge of nature. This proposition is indeed founded upon the plain principle, that facts alone are infallible, because they are the handiwork solely of God; and that the deductions from them, of which all theories ostensibly consist, are possibly erroneous, because the production of frail and fallible mortality. How absurd, then, as well as dangerous, is it, to peril the truth or falsehood of theory upon its conformity with, or dissent from, the canons of a fashionable hypothesis; and how foolish is it, so long as the *dictum* of one man is as good as that of another, to rest satisfied with gauging either by the other, when both may be wrong. To measure one doctrine by another, when both may be tested by truth, is to act like the pilot who would steer by his knowledge of the coast, when the compass and chart are placed before him for the very purpose of directing his course. It was to the *exposure* of this fallacy, that Bacon owed his fame, and modern Europe its progress and philosophy; it was by *adhering* to it, that all prior ages may be called blanks in the stupendous history of science. The reason is plain. By making the reception of one theory consequent upon its conformity with another, without having recourse to nature, the error which existed in the pattern or model hypothesis, was perpetuated in all its collateral and descendant systems, while the truth of other doctrines, by its disagreement with this false and erroneous principle, formed the very reason and cause of their rejection. By the Baconian method of declining all mensuration of one theory by others, and testing each by one common crucible, the alchymy of nature, error when committed was discovered, and was never suffered to mislead or pervert.

Those who object to Phrenology, upon the assumption that it is opposed to Christianity, have hitherto been answered by the apostles of the science in a spirit with the strain of which we cannot sympathise. They have pleaded the general issue, and have never ventured to demur to the relevancy of the accusation; thus, by implication, acquiescing in the competency of the objection. The conduct of both the accuser and the panel is the natural result of the prevalent irreligion of philosophers, and the want of philosophy among theologians. Did each combine a complement of both qualities, the one would be ashamed to start the objection, and the other would disdain to answer it. Truckling to the rampant fanaticism of modern ignorance, Phrenologists have not ventured to dispute the premises of the objectors, but have contented themselves with exposing the fallacy of their conclusions. They have not dared to decline the jurisdiction of the court before which they were arraigned, but, on the contrary, have acknowledged its authority, by pleading before it their innocence of the delict contained in the accusation. A little more courage would have produced a little more candour, and sincerity would wondrously have improved the logic of both parties.

There is, indeed, nothing so striking in the history of mankind, as the power of bigotry, and the weakness of philosophy. Why should the mouth of truth be shut before the ear of the theology? Because, forsooth, priests are omnipotent, and mankind are their slaves. Why is this? May not moralists appeal to that very people from whose suffrages priests derive their sovereignty? May they not divide their empire, and eventually overthrow their dynasty? We know that the answer is, No. Men are not enlightened enough to listen to reason, but they are ignorant enough to love the flattery of their prejudices. And thus the evil of society, is its want of knowledge and liberality; and because this is so, it is still to have truth concealed from it, and error assumed by implication to be the proper path of every nation. This is, indeed, a specimen of dastardly selfishness, but has small pretensions to the character of philanthropy. It breathes the very spirit of aristocracy. It assumes that the great body of the people are base and vile, and that philosophy sits upon a throne, from which it should look down with calm indifference and contempt upon the *cannaille* of humanity, that lie, gasping slaves of superstition, at the feet of a vulgar tyrant, without one emotion of pity or generous regret. The vice of philosophers in all ages, has been that of not having sufficient confidence in the excellence of human nature, in its generous impulses, in its healthy mental condition, in its uniformity of genuine and unsophisticated feeling. They might have been the leaders of mankind, had they trusted in man. The same ears that heard the yells of persecuting denunciations, were open to the nobler appeals of benevolence and truth; the popular heart is always sound, and pontiffs would have been compelled to resign the sceptre to philosophers. The real lover of truth will ever have sympathy with the people; he will live among them—he will be with them, and of them. But the lover of truth is the lover of religion, and it is from a want of devotion to this great object, that philosophy has not found a kindred spirit in unsophisticated but truth-loving humanity. It has never yet condescended to investigate the harmony betwixt nature and religion, or the profundity of reason, which is to be found in the spirit, although often clouded by the words of revelation. It has never looked upon the contemplation of God and immortality as the highest aspiration of man; and hence, has it not roused the strongest sympathies of nations. It has left men to be the interpreters of religion, who knew nothing, and cared less, for the broad book of nature—who stuck to the letter of Scripture, however much it offended reason, and considered the discovery of a great plan and system of interpretation, as impious and sceptical. It has taken for granted, that reason was at antagonism with religion, because priests elevated religion above reason; and forgotten that fanatics had committed the grand mistake of assuming, that he who was merely questioning the interpretation which they themselves presumed to put upon Scripture, was professing a doubt of revelation itself. These two classes of inquirers must be combined in the present state of society, if the friends of social order would preserve morality. Men have received enough of knowledge to emancipate them from priestly thralldom, and are in danger of being disengaged from piety also. What nobler office could philosophy fulfil than to discover and demonstrate the harmony of reason and Scripture? and what more necessary task can the theologian impose on himself, than that of proving by the test of fact, to which everything must be subjected, that nature,

title to reception or rejection, prior to an examination of the evidence on which it founds its pretensions to universal belief and attention. It was the favourite aphorism of a popular poet, that

“Where ignorance is bliss
‘Tis folly to be wise!”

and what does this sentiment imply? Wisdom is the knowledge of truth, and truth is but a convertible term for the laws of nature or the ordinances of God. Ignorance is error, delusion, or a belief in the existence of what has either no being, or has been prohibited by the Deity. The proposition, then, stripped of its metrical aptness of expression, maintains that a knowledge of the government and character of God, may be the necessary harbinger of misery, and that falsehood and illusion are indispensable to human happiness. An ancient classic, in proclaiming his confidence in the existence of immortality, confesses, that, if in this belief he errs, he errs so willingly, that he would never wish to learn the truth and to be disabused. We hear it preached from the pulpit, and pleaded by learned bishops from the press, alternately in fulminations against sceptics and flattering appeals to candid Deists, that even although Christianity were a delusion, religion an error, and immortality a chimaera, their general reception and influence preserve the order of the state, promote the well-being of society, are the source and centre of the happiness of thousands, and form the hope, stay, and comfort of the mass of mankind. Hence, it is argued that the sceptic, even although truth, and reason, and fact, were on his side, is left without excuse, when he endeavours to disabuse his fellow-creatures of errors in which they have built up their tranquillity and hope. And what is the moral of this argument? No less than that it is quite possible happiness may depend on error, and misery be the result of knowledge of the actual state of God's moral government; that Bishop Watson reigns supreme over truth; that it cannot possibly be good or excellent unless it approve itself to his reason, and meet all his views of the fitness of things; while if the management of the universe be not directed on the basis of his peculiar plan, it must be defective, immoral, and unwise! Frail, ignorant, short-sighted mortality. Is the creature of a day and of the dust to assume the attribute of omniscience without the arm of omnipotence—to presume that it can see the end from the beginning, and to say it is dangerous or unprofitable to teach any given doctrine, whether it be true or false, because it can see that consequences are to proceed from it, which are destructive to the happiness of mankind? Is man, who cannot even see what a day may bring forth, to palter with truth, which producing troubles that at the most are but for a moment, always does and must work out a far more exceeding, yea, an eternal weight of glory? And yet, are there not men, who, doctrinally confessing that they are desperately wicked, blind, ignorant, and erring, act as if they could trace the results of certain doctrines through the whole history of society, and object to their promulgation, because, whether true or false, they are inimical to peace and good order? Is not every legislator even, who allows to remain on the statute-book a single penal enactment against Deism, Atheism, nay, blasphemy itself, upon the plea, not that the doctrines they involve are false, but of their tendency to obstruct the order of social government—or who objects to the open declaration of sincere opinion, without reference to the accuracy of its deductions, but with an eye solely to its anticipated results,—is not he setting himself above truth, and presuming to judge of the extent of its efficacy. We remember of a religious society, which, in its laws, declared that it was instituted to promote the goodness of God; and, truly it may be said, that enactments against Atheism, are passed upon the pretence of endeavouring to promote his existence; or, that attempts to put down by prejudice or clamour, heterodox doctrines, are equivalent to establishing the truth of orthodoxy; as if God and Christianity required such crutches to extend their influences through the length and breadth of the land—or, as if the value of the impression of their existence did not depend upon its truth—or, as if truth were not stalwart enough to contend single-handed against error, even although its name were legion—or, as if the only causes of its failure were not the officious interference of the treacherous ally, state power—or, as if truth, however dangerous or terrible, were to be concealed by the potency of parchment, the generalship of judges, the jealousy of juries, or the grim jaws of a jail.

But every man who, abjuring the repudiation of truth for its apparent consequences, even refuses to listen to it unless a palpable present advantage can be pro-

mised in its train, is practically acting upon this principle. He has not yet arrived at an implicit belief in that first and fundamental axiom, that truth, like Scripture which is given by inspiration, is profitable for doctrine, and reproof, and instruction. Unless he can see the end from the beginning, he ought to know, that he can never be capable of judging of the advantages to be derived from the promulgation of any doctrine; and that, consequently, being necessarily ignorant of all ultimate results, he ought never to disregard the pretensions of science, on the mere ground of inability to perceive its utility. He is bound, from abundant experience, to believe in the importance of all truth for its own sake; in the fact, that it always produces more important effects than ever were anticipated; and that branches of it, which are of no importance in themselves, are, as they have always been, keys to the door of other truths, which have opened to that temple where are deposited the knowledge and happiness of mankind.

It has often been urged, that although Phrenology were true, it is to be discouraged, because its practical application would be productive of social disorder, unhappiness, and injustice. It has also been contended, that Phrenology cannot be true, because it is injurious to public and individual tranquillity. Those who thus argue, are both illogical and presumptuous. They are illogical, because they shift the scene of controversy, and try the question by a standard which is not capable of measuring it. The investigation of the truth of Phrenology, involves solely a matter of fact; and to seek to determine it by the solution of an argument founded upon a hypothesis *a priori*, is an eminent example of irrelevant reasoning; because, even although the consequences of the reception of the science could be proved to be beneficial, they could only be available by its being true; and were it false, they would not continue to be injurious, because it would thus have no existence, and its reputation even would be that of all error, very short lived. But such objectors are also presumptuous, because, with eyes that cannot see beyond the boundaries of the "ignorant present time," they reason as if they could look into eternity; and they forget the infallible axiom, that truth is ordained by that God who is love, and that if Phrenology be consistent with fact, it must, in spite of all appearances, possess the advantage which characterises all that is real, of being ultimately beneficial.

The argument of *cui bono?* deserves as little quarter. To aver that Phrenology, although true, is of no use, is to allege that a vast field of truth neither is nor can be of advantage to mankind; or perhaps, that because the querist cannot see the land on the other side of the blue mountains, he is warranted in maintaining that no fertile valleys lie beyond. We are not bound to demonstrate the utility of the science, in order to entitle us to a share of public attention. We take our stand upon an assertion we offer to substantiate by proof, *that it is true*; and to found our claim to a patient hearing upon the aphorism, that all truth is either presently, actually, contingently, or remotely of importance to the welfare of society. This is a doctrine which seems to possess the influence of an instinct in the human mind. Thousands of scientific men are at this moment engaged in the pursuit of discoveries and the performance of experiments, the tendency, aim, or ultimate consequences of which, they do not even pretend to estimate. Nay, many acknowledge, that after they have ascertained the facts of which they were in search, they do not see that they can be productive of any available results. It is enough for them to know, that by their labours they may discover truth; confident, that in spite of all appearances, some good purpose must be served by unfolding what is real, and detecting what is fictitious.

There is another class of men, ay, and clothed in the lion's skin of liberality and enrobed in the wide professions of a universal philanthropy, who without inquiry, and in obstinate rebellion against the spirit of investigation, in which all science clamours to be tried, may be termed the scoffers at Phrenology; and from their verdict an appeal lies, and has been made to public opinion, which has done justice to it, and passed judgment upon them. Phrenology is an edge tool, which is not to be played with by a careless, any more than by an unskilful artificer. Once recognised as a science—welded into the frame-work of human thought, and feeling, and action—registered in the chartulary of received and truth-fraught philosophy,—it must overturn, or change, or reform the whole system of metaphysical inquiry—the entire statute-book of moral institutions—remodel the dogmata of theology—and substitute, in the whole theory and practice of legislation, for an expediency,

which was only excusable on the ground of ignorance which could not be enlightened, the fixed standard of immutable truth, and that eternal justice which truth alone could ascertain. No man who sincerely loves truth, or cherishes a devotion for science, would have treated the claims of such a system with ridicule without argument, or rejected its pretensions by a disingenuous and affected misrepresentation of many of the statements of its expounders, and by carping at some of the palpable eccentricities which may have accompanied the elucidation of the subject, as if they involved the falsehood of the whole science. A laugh is not an argument, and a philosopher would disdain to cheat the ignorant or vacant mind, which it bespeaks, by seeking to raise the one as a substitute for furnishing the other. Where mere amusement is the object of the critic, satire may be a weapon the use of which may be extenuated if not justified; where refutation is the end, logic and argument are the only legitimate means.

In an age like the present, rejoicing in the practical application of the Baconian philosophy—deriving much of its happiness, and all its enlightenment, from the adoption of inductive logic—advanced in riches, in power, in virtue, by taking no doctrine for granted—and by assuming nothing, however hallowed by antiquity or specious in appearance, until proved by stubborn facts, are we to be arrested at the threshold of our inquiries into a science professing to be derived altogether from a classification of real phenomena, open to continual observation—when we propose to make these the test of its truth, by the assertion that Phrenology necessarily inculcates the doctrine of materialism, and cannot therefore be true? If the spiritual essence of mind be not a principle based on nature, it must be false; if it do rest on this foundation, then does it stand on the same evidence as that whereon Phrenology depends; and if that science be established by the same description of proof as that of *im*-materialism, then is it clear that its tendency is not towards materialism. But if Phrenology be vindicated on the evidence of nature, if that be the only standard whereby the real essence of mind can be substantiated, and the system do infer materialism, then is materialism true. If Phrenology, professing to be purely a deduction from the phenomena of nature, be inconsistent with those very laws upon which it claims to rest its pretensions to credibility, it is refuted, and must be false, whether it lead to materialism or not. But if it can bear an examination by those very principles in which truth alone can centre, then, whatever doctrines it involves, must be true also. Those, therefore, who allege that Phrenology leads to materialism, are only furnishing a conclusive argument in favour of the very doctrine which they repudiate.

While we are perfectly willing to believe that many Phrenologists are immaterialists, and therefore met the charge, that the science they supported led to materialism, by pleading the general issue, instead of objecting to the relevancy of the libel, not from cowardice of reputation, but from a conviction of the pertinence of the plea, we are equally well assured that others argued the question on the same ground, while they were materialists at heart, but were afraid to identify their name with an unpopular proposition; and there are none upon whom our suspicions more firmly rest than those who repel the charge of being materialists with rampant fury, as if it inferred in its professors some moral obliquity or mental obtundity. Such men are unworthy of the name of philosophers, because they have not yet learned that love of truth, which would give them courage to brave the malignity which would attempt to affix disreputable imputations on the open profession of what was sincerely believed, after calm and dispassionate inquiry. They are only equalled in our pity, by the compassion with which we regard those critics of America, who, in journals singular for their pretensions to a heterodox liberality, yet endeavour, and with success, to crush the free expression of opinion on this subject, by the bigot bawl of spiritualism against what it terms carnality, Atheism, and withering scepticism.

We adopt another, and, as it seems to us, a more logical, as well as a bolder line of argument. We ask at once, and without hesitation, *what, although Phrenology did teach materialism?* We have already pointed out the absurdity of an argument *a priori*, against a system claiming to be founded on fact. If it be said that materialism leads to infidelity, it would be well for the speaker to consider, whether the admission may not be an argument against Christianity, rather than against Phrenology. Let those who urge the cry of scepticism, examine their hearts, and see whether *they* be not the true infidels, who cannot depend upon the promises

of God, unless they are satisfied that there is something in the very substance of the soul which renders its annihilation impossible. So far from giving those men credit for extra piety and evangelical faith, who talk so loudly of the grossness of organised matter, and declaim so earnestly about the corrupt vileness of the human body, as has been hitherto the fashion, we confess that we are much more inclined to accuse them of discontent with the condition of existence which the Almighty has been pleased to appoint, and of blaspheming a form and a substance capable, to our sense, of a perfection and a sublimation which surpasses in its grace and nobility all that we can conceive of the disembodied spirit of modern theorists. The Christian builds *his* hopes, not upon the indestructible essence of the human soul, but upon the sure promises of the Gospel. He knows that his mind will live for ever, not from its own substance, but from the free gift of God. He feels, that not its essence, but its faculties, fit it for everlasting progression. He believes, that not nature, but Christ has brought life and immortality to light; and that he did so, not by showing the essence of mind, but by establishing the resurrection of that very reviled material substance called the body, which, notwithstanding its pretended grossness, is to live for ever through the countless ages of eternity. His credence is in no purgatory, but in the fact that a day shall be, when all that are in their graves shall hear the voice of the Son of man, and shall come forth to the *resurrection* of life; and that the dialogue betwixt Lazarus and the rich man, which has been cited as evidence of a state detached from the body, is, if not an allegory altogether, a proof, that neither in heaven nor in hell can existence be conceived without water, and thirst, and a gulf, and a tongue, and eyes, and all bodily attributes.

It by no means strengthens our conviction of Lord Brougham's belief in Christianity, that he has chosen to peril the doctrine of human immortality exclusively upon a rejection of that of materialism. His Discourse of Natural Theology reminds us forcibly of the excellence of the proverb, *ne sutor ultra crepidam*, and proves that a great orator may be a very indifferent metaphysician. We pass over, by merely noticing, his assertion, that the mind could conceive of, and reason upon, all the abstractions of numbers and mathematical problems, without any notion of externality; and, retorting the proposition, by the averment, that the knowledge of their phenomena is altogether matter of experience, and is therefore least of all independent of the external world, seeing that they are inventions and discoveries confined to civilised life, and not even imagined by the ignorant and the savage. But we cannot suppress our surprise at the unskilful manner in which his Lordship avails himself of the old argument derived from consciousness. We *know*, he contends, that every particle of the human body is changed once in six or seven years: we feel assured, from the evidence of our consciousness, that our mind is the same intellect, and that we are the same entity now, that we were forty years before: the body having changed, and our being conscious that the mind has not, *ergo*, the body is not the mind! Here his Lordship has perilled his whole case upon the infallibility of consciousness, while it is certain that we are as little conscious of any change in the body as of alteration in the identity of the mind. He has also forgotten, that the transmutation which takes place in the intellect betwixt the period of infancy and manhood, is as presumptive of a renovation of substance as the novation of the corporeal particles. But above all, if mere identity were conclusive of spirituality, it would prove that the body was immaterial in its structure and qualities, however gross in its substance. Although the *particles* of the body undergo a transformation, its diseases, colours, shapes, peculiar susceptibilities, remain permanent, fixed, unalterable. The idiosyncracies of the system are never eradicated or changed; the marks of the same wounds, and the virulence of the same tumours exist unabated, although all the particles of which they were composed have probably been obliterated and renewed at least ten times over. Thus, this profound discovery in metaphysics, if it be available for any purpose whatever, proves that the laws of mind and body are identical in their phenomena, and establishes upon the very basis of the spirituality of the soul, the immateriality of the body. But, forsooth, his Lordship will not admit the existence of matter, unless the independence of mind be conceded; and thus the question of immortality is argued in the style of a special pleading in the Court of Chancery. What becomes of the favourite solving apparatus of consciousness here? Where would have been the sense of individuality, but for an external material world?

“ When Bishop Berkeley said, there was no matter,
There was no matter what he said.”

The existence of matter must be conceded, in an argument which has for its object the proof that *there is something besides*; and when that is admitted, the proof rests with the sceptic, who conceives that the intervention of some other principle is necessary to account for the phenomena presented to our experience. The hidden qualities of this substance must be detected, and its whole attributes known, before we can be warranted in assuming the existence of something else as necessary to the production of what is presented to our consciousness. And when such a principle as that of galvanism or electricity, confessedly a property of matter, can be present in, or absent from a body, attract, repel, and move, without adding to, or subtracting from weight, heat, size, colour, or any other quality of a corpuscle,—it will require some better species of logic than any hitherto presented, to establish the impossibility of mind being a certain form, quality, or accessory of matter, inherent in, and never separated from it. We do not argue thus because we are confident that there exists nothing but matter, for, in truth, our feeling is, that the question is involved in too much mystery, to entitle us to speak with the boldness of settled conviction on either side. But we assume this position, because we think the *onus probandi* falls on the spiritualists, and that they have not established the necessity of inferring the existence of another entity besides matter, to account for all the phenomena of mind, by having failed to exhaust all the possible qualities or probable capabilities of that substance, which they labour so assiduously to degrade and despise. And while they have failed altogether to establish this necessity, whereon depends their entire proposition, they have had recourse to the usual expedient of unsuccessful logicians, of exciting the ignorant prejudices of bigotry and intolerance against all that is dignified with the name of dispassionate philosophy.

The truth is, it is time that all this fudge and cant about the doctrine of materialism, which affects the theory of immortality in no shape whatever, as the God who appointed the end, could as easily ordain that the means might be either through the medium of matter or spirit, should be fairly put down by men of common sense and metaphysical discrimination. The term “spiritual,” in the Bible, applies not to the substance of which mind is composed, but to its moral condition, while the word soul, means breath, or the mere principle of life. God breathed into man’s nostrils the breath of life, and he became a living soul. This soul, Paul tells us, is sown in corruption, and raised in power—sown a natural body, raised a spiritual body; meaning thereby, that the believer who is born sinful, rises from the grave pure and holy. The very attachment of the term body to the word spiritual, shows that Paul contemplated the idea of matter being spiritual, or pure and virtuous. In truth, the term spiritual, meaning thereby an immaterial entity, is not once hinted at in the New Testament—is not a Christian doctrine,* and is known by theologians to owe its rise in the Church to the converts from Platonism, who endeavoured to incorporate the doctrines of their Master with their new faith. How, indeed, is it conceivable that this world should be a school for the next, if the nature of man is to undergo an entire transformation, so that, instead of being restored to consciousness at the resurrection, endowed with a certain amount of knowledge, he would have in fact to unlearn all that he had been taught? He would need to forget the language of nature and sensation, of material relations and tangible objects, and that, too, in spite of the declaration, that there is to be a new heaven, and he is to be placed on a new, but solid, fixed, and firm set earth. To him who had no eyes, what would be the landscape or the sky?—who had no nostrils, what the fragrance of flowers?—who had no ears, what the very music of heaven, made of material vibrations, inappreciable by a spiritual sense?—or who had none of the modes of consciousness he now possesses, what all the beauty, majesty, and sublimity of external nature? Heat, cold, light, and shadow—what would be the meaning of such terms to one without senses? the warm hand, or open heart, what were such words to those who had no fingers, and no blood, and no pulse? Poetry, painting, sculpture, music, love, friendship, grace, symmetry, beauty—what could these have to do in the vocabulary (if indeed there can be words

* “Dust shall return to dust, and the spirit to God who gave it.” This means simply, that the body shall decay in the earth, and the breath, or principle of life (existing in a cabbage, or a cat, equally as in a Christian) shall be separated from it, and return to the Deity who animated the body with it.

where there are no tongues) of one who knew nothing of the relations of flesh, blood, or matter? Father, mother, wife, child—what were such words, without the very faces that bent over and blessed us, and the soft eyes that filled ours with their gaze, and the soothing maternal voice that calmed every trouble, and the childish dimple that made the toil which clothed, and fed, and cherished it, the sweetest task and the highest pleasure? This is no idle question; examine our whole vocabulary; it is either composed of visible, tangible, material objects, or sentiments which are expressed by using the symbols of external things to express them. Our whole ideas are even originally framed upon the consciousness of sensations, or upon resemblances betwixt thoughts and outward appearances. Indeed, it is not too much to say, that if we exclude all ideas of the external world, or thoughts illustrated or derived from it, our minds would be an entire and melancholy blank. And what is the foundation of the pertinacity with which the doctrine of spirituality is maintained? Simply, that being indestructible, the soul is more likely to be immortal; because to destroy it, would be to do a violence to its natural course of being; as if to change its whole structure, were not a sufficient violence to counteract the whole presumption, or as if the doctrine of resurrection were not a miracle, and therefore a suspension or mutation of all the mere ordinary career of mind and feeling.

These are not the only theological objections which have been made to Phrenology; for, indeed, when men have resolved to condemn a system, they do not scruple to bring against it as defects, or pleas in bar of acceptance, its implication of doctrines, of which, in another shape, they are the most strenuous supporters. The last charge of the squadrons of bigotry, against the solid and unflinching square of the science, is their most furious, but least fatal, onset. It is like the desperation of a drowning man, who, even although death be inevitable, would drag down with him to the depths, the friend who cannot save, but may die, with him. All Phrenologists must, it seems, be fatalists. This may be an argument against freedom of the will, but, surely, cannot prove a philosophy of *facts* not to be true. The question recurs, Is the science consistent with the *laws of nature*?—not, Does it harmonise with any man's notions of divinity? If it quadrate with fact, the inferences fairly deducible from it must be also true. But how does Phrenology lead to fatalism? By teaching that man's thoughts are controlled by his innate organisation; and that his will, his motives, and his actions, are limited, directed, and suggested by circumstances over which he can have no control. This is all the charge of fatalism which Phrenology involves, and this accusation we at once meet by a candid, but confident, admission of its truth. Nature is a fatalist. It frames one being in the mould of man—bold, vigorous, sagacious, and brave. It shapes another in the beautiful model of woman—timid, fragile, retiring, gentle, and cowardly. And let them will it ever so much, they will find that *he* cannot confide with modest and timid dependence; while *she* may school her feelings for an age, without acquiring courage, vigour, or sagacity. Nor until *humanity* shall cease, will *he* cease to be proud, and to pursue; or *she* to be vain, to be lovely, and to be loved. And whether the ferocity of the savage be natural or acquired, fatalism is equally in the fact. If he have inherited his wild malignity, and untameable restlessness from his swarthy parents, they lead him and command him. If they were not in his blood, but the effects of education, or rather of his ignorance, still equally did fate sentence him to the wilderness, and those savage tutors who could prune the branch, or twist the twig so that it could no longer grow as heaven would have trained it. What is it to the question of fatalism—to that control of man's free action, of which he himself is conscious—whether the urchin that has suffered the bridewell penalty of his fiftieth petty larceny or paltry pickery, was born a thief, the son of a Botany-Bay father, and a mother from the hulks; or was altogether excellent in his innate faculties, but only bred up in a brothel, sent to a school of pickpockets, kept in sacred ignorance of virtue or religion, kicked out of the den into the street to steal his bread with his own nimble fingers, and nurtured in the ambition of being the most daring burglar or dexterous swindler of the gang—whose blush was summoned up in his brazen front, not for being dishonest, but for not being expert in deception—and whose sole fear of censure was not for thimble-rigging, but for not cheating with easy confidence and secure proficiency? Is it not equally beyond the personal control of the drunkard's free action and better reason, to abstain from debauchery, whether he imbibed his supernatural soliciting from constitutional inwoven pronation, or (being born of a sound mind) he was suckled by

the formal and clumsy gallantries of science, the fopperies of philosophy, and the jubilations of the studious, on their brief emancipation from the severe and sober investigations of the college—we say, that we are aware this army of wandering *savans* have peremptorily rejected the postulations of Phrenology to consideration, however brief, or inquiry, however superficial. This is what is ever to be expected from *British* philosophers, (?) who are, and ever have been, behind the rest of Europe in the reception and adoption of new and important discoveries. They are always the last to investigate, and the first to oppose, the annunciation of novel doctrines. Homœopathy, Animal Magnetism, Transcendentalism, have at least been *considered* abroad; and Phrenology has been subjected to an investigation of the French Academy and Institute, and embraced in a report by a section of these bodies, regularly appointed. But the fear of ridicule has ever been stronger in the minds of English professors than the love of science. They admit nothing to be true that is not received, and nothing to be good that is not recognised. British philosophers, like British matrons, will receive no one, and nothing, into the circle of their acquaintance, that has not proved a title to the *grand entrée*, by being declared by persons of figure, to be “perfectly respectable.” They are the reflex of the national mind, that ventures upon nothing until the records have been searched for precedents. As the Countess would admit nobody to her drawing-room who merely offered proofs of their rank and purity of conduct, because that was not evidence in the eyes of other people, but would receive them at once if they visited with the Duchess; so Professor A. or Doctor B. patrons of the Almacks of science, will permit nothing to be entertained as philosophical, until it have been presented at Court, or appear in good company. For such men, Phrenology is not a genteel enough science; because my Lord, or his Grace, are not yet agreed that it is true. To them, it is a system like what Presbytery was to King Charles—“not fit for a gentleman.” And what is the result? While they are trifling with knowledge, and stand aloof from society at large, uncheered by general sympathy, the great body of the people, who view their labours with listless indifference, because they cannot show them “any good thing,” are receiving this despised science with avidity, and promoting it with ardent enthusiasm. To their verdict, we appeal from the tribunal of dilettanti philosophers, and meditators on the mysteries of midges. We leave them to infuse insect life into flint, and to study the revolutions of an apiary commonwealth, contented by means of this despised science, to create a soul of good out of things evil—to disclose the wonders of the human mind—and to proclaim the philosophy of virtue, and the principles of happiness. Yes; we leave the circles of rank, and title, and money to admire the historian of antediluvian tea-kettles, the chronicler of Roman sauce-pans, and the annalist of ant-hills, and seek only to invite the great body of the people, to know what they are, what they ought to be, what they may be, and how they can become what is dictated equally by their duty and their interest.

One of the greatest advantages of Phrenology, arises out of an objection, which has presented a most formidable obstacle to its extension. This is no other than its supposed tendency to materialise human nature. From its principles, society have, for the first time, been made clearly to perceive the quality of the relation which subsists betwixt man's physical and moral structure, and impressed with the necessity of improving his corporeal, preliminarily to advancing his mental, constitution. It has awakened us to the connection betwixt a clean skin and a clear conscience—foul linen and foul thoughts—the indispensability of a sound body to the production and preservation of a sound mind. It satisfies us, that a contribution of Testaments and twopenny tracts, to those who are shivering in the cold of an angry winter, is not so conducive to their spiritual welfare, as a supply of flannels and a cart of coals; and that bodily want produces mental corruption as necessarily as corporeal comfort is the condition of intelligence and virtue. It shows us, that bad health may be the cause of bad passions, and that misery is the enemy of morals. It presents to us the *rationale* of mental dependencies upon material conditions; and by disclosing the philosophy of physical psychology, if a term so incongruous, though so true, be permitted, it furnishes us with the amplest materials for the promotion of social felicity. It has made man remark the relation betwixt study and stuffed cushions—spine support and spirit strength—the power of attention and chair-backs—and the training of the infant mind, through the play-ground, and the drill-serjeant. It makes what was formerly mere conjecture, a sober certainty, and by practical de-

monstration, warrants us in pursuing a course which the vague hypothesis of former ignorance would not have sanctioned. It cheers the philanthropist with the conviction, that although human *nature* has been in all ages the same, it does not necessarily follow that human *action* may not be greatly altered. It demonstrates to the legislator, that the position is a false one, which assumes man to be unprogressive, merely because he has not progressed—and unalterable, because he has not hitherto altered; which deduces from such premises the conclusion, that the sources of vice and the causes of crime, are equally ineradicable from the human *heart*, and that all he can do is, by severe penalties, to restrain them in human *action*. It discloses to him the real cause of the disease, and shows him that he need no longer waste his time in merely attacking symptoms. It proves to him that a farthing spent in enlightening, and feeding, and clothing, will save a pound in punishing, and that cheap comforts and large schools, will absorb dear crimes and large vices. It bids the benevolent strike at the root of the evil, which every day shocks his fine sensibilities with the most haggard aspect of broken-hearted destitution, and to reflect that where means are circumscribed, the temporary relief of the ragged beggar is actually less humane, than the strenuous exertion of all his energies in the furtherance of those means by which beggary itself shall cease out of the land. Above all, it satisfies him, not by a vague conviction unsupported by the hope of practicability; but by demonstrating the nature and amplitude of the means, and their plain adaptation to the proposed aim and benevolent end.

Phrenology settles many metaphysical and theological controversies, by a reference to physical fact, which were formerly the fruitful source of discussion, in which both parties claimed the victory, and neither had an umpire who could crown the true victor. On inspecting the human brain, and comparing it with that of all other animals, the argument of destination, derived from design and structure, establishes their different and opposite purposes. The brute creation possess no organ which produces the desire of progression—man alone has ideality. The former have no faculties which could give the capacity of improvement. The latter has not only the wish to advance, but the powers necessary to gratify the desire. At the end of a hundred years, the brute has no wish to be more, or other, or better than it is. At the end of a thousand ages, man would have exhausted worlds, and then imagined new. He has the physical organs which wish to be onward, and those also which still advance him higher; and hence is his capacity without limit, and his destiny, therefore, existence without end.

Each individual of the human species, has every organ of the brain possessed by any and every other. The whole human race have, therefore, the same original faculties, and prove thus, that they are all of the same nature, and sprung from the same stock. Phrenology, then, proves Scripture—it teaches us not to be proud, because those whom we despise are capable of being what we are; and it bids us not despair of humanity, because, whatever one man has done or been, has been solely by means of powers which all others possess, and which cultivation may make all others exercise. It thus shows, that vice exhibits the mere present state of man, but that virtue demonstrates his capabilities; that the one tells what he does—the other what he can do; that the former records his actions—the latter describes his faculties. *It teaches that there is no difference in susceptibility of advancement, betwixt the highest and the lowest in the scale—that their sole distinction consists in the adventitious circumstances which have called their faculties into action. It bids us remember that the chance of geographical position—the accident of an accident—the fortuitous circumstances of climate, class, or society, produce all the difference betwixt vice and virtue; and then it asks us to look with pity and charity upon crimes as misfortunes, and upon moral superiority with humility, as the result only of a kinder lot and a more favouring providence. It applies the aid of philosophy to the exposition of Scripture, and acknowledges the justice of the plea—"Now if I do that I would not, it is no more I that do it, but sin that dwelleth in me."

Phrenology proves it to be no longer true, that sensual or vicious persons are only their own enemies—a proposition which it was not easy to question, while it was held, that the soul had nothing to do with the condition of the body. There is the most conclusive evidence, that the brain of the parent descends to the child; that every exertion of moral greatness, and every act of vice, has its cerebral effect, and transmits to posterity a vitiated or improved mental constitution. It explains how the

exercise of organs increases their liability to action, and the suppression of their activity discontinues the direction of the stimulus towards them—proving the philosophy of the exhortation, to resist evil and it will flee from thee; and by showing that the excitement of an organ of propensity, or moral sentiment, enhances by sympathy of contiguity, the desires or sentiments which surround it—solves the mystery of the fact, that vices are never single, nor the manifestation of one virtue unaccompanied with kindred excellences. By practically illustrating the doctrine of hereditary talents and defects, what an incentive does it not present to every parent, to regulate his passions—to purify his affections, and exert his moral nature, when he discovers that, upon his own measure of virtue, depends the happiness of those future pledges of love, which are, and ought to be, the dearest objects of his heart!—nay, what an inducement is it to every member of the social polity, to educate and improve his fellow men—to advance their sense of justice and of duty—to promote knowledge and good order, when he is aware, that while there remains in the state a single bad father, or bad mother, there is a hot-bed of rapid growing crime and calamity, and a cruel infliction of the penalties of hoary guilt upon infantine and uncomplaining and helpless innocence! This same law of human nature, proves that man was created upright, and that it is himself who has sought out many inventions. It shows that the mental and moral, is the result of the physical, constitution—that a vicious corporeal, or cerebral, produces a depraved system of thought and feeling—that this is the certain cause of sorrow and misery—and that it is faithfully transmitted from sire to son, by the operation of physical nature. To allege that God made man imperfect, savage, or ignorant, is, in truth, simply to say, that God made misery not an accident inseparably contingent upon the noble attribute of freedom of human will, but a designed and necessary condition of the existence of his whole rational creation. The beasts of the field live under the guidance of a blind instinct, which renders their constitution uniform, immutable, perfect. They always act right, because they cannot help it; their conduct is invariable, and consistent, because their actions are necessary, and their motives always the same, and always irresistible. They are mere animated machines, little above the turf on which they browse, or the stones of the rock in which is their den. In addition to these brutal propensities, man is in possession of a variety of moral sentiments and reasoning powers, which take him out of the catalogue of creation, and the class of instinct, and place him in a temple of his own, where the sway of passion is divided with a new dynasty, which reigns in the conversion, regulation, and direction of it, by a thousand free suggesting influences, and a power of perception and reflection, which enables him at least to *know* what is good and evil. If it be contended, that man should have been also made infallible, that he should have been irresistibly good, and instinctively virtuous, it is plain that he would have been thus a mere moral machine—that the very scheme argues an immutability of nature, and, therefore, a total destitution of the faculty of inward progression—that however exalted the externality of his actions might have been, irresistible motives, uncontrollable impulses, and deeds dictated by instinct without reason, left him in a state no higher in dignity than the beasts over which he was set. Freedom of choice is the very essence of moral greatness. Were it impossible for man to choose the highway of vice, there would be no more excellence in selecting the path of virtue, than in fish swimming, or in birds flying. “*Non virtus est non posse peccare. Posse peccare datum est primo homini, non ut proinde peccaret, sed ut gloriosior appareret, si non peccaret quum peccare posset.*” If then, to be a moral agent, be a high and exalted privilege, and its necessary condition be freedom of choice, action, and will, we can see at a glance, that moral evil is the mere accident of moral liberty—and that it is not necessary to, but a contingent of, that possible fallibility, which gives to man the sole dignity of his character, the trust in his own keeping of the management of his moral and intellectual faculties. Moral evil becomes, thus, not the law of God, but the abuse by man of powers which made him capable of shunning vice, had they been properly exercised. To say that Adam should have been infallible, involves one of two alternatives, either that he was a necessary or a perfect agent. Had his actions been inevitable and necessary, he could not have been a moral, an intelligent, a *progressive* being. He would thus have been adapted, not for eternity, but merely for time—for the period in which he existed, not for an age to come, where necessity involved permanence of condition and absence of improvement. To be a perfect agent is, in fact, to be God alone;

because, wherever there is not omniscience, there must be a limit to knowledge, or, in other words, ignorance; and wherever there is not omnipotence, there must be a circumscription of power, or weakness. To contend that imperfection of power or knowledge is an evil, is to maintain that sentient existence and the capacity of enjoyment are evils; because there must have been a graduated scale of being, to have produced progression and moral subordination. For man to complain that he suffers under the want of omniscience and omnipotence, would be to grumble that man existed, or that there was any thing in the universe but God alone. The angels, to have existence, must have been less than their Creator; and had they lamented their inferiority, they must have mourned that they were in being—for, not to be inferior, was to be equal to Deity, and to be equal to omnipresence and eternity, was to be the everlasting One; because, two eternals are a contradiction. Man, to have existence, must have been a little lower than the angels, although crowned with glory and honour; and, had he not been lower, he, of course, would not have been man. Gradations in the scale of intelligence and being, we thus see, must have become a law of the creation by inevitable necessity, whenever the benevolence of the Deity resolved that he should not be alone in the universe, but should fill it with happiness; because, to make creatures other than himself, they must have been less than himself. The angels could not complain of not being God—men of not being angelic—nor one mortal of not being equal to another; because he could not be so in all particulars, without losing his own identity. And of this law of graduation, is the subordination of the condition of the child to the moral and physical state of the parent. God deals not with men as individuals, but as a species. It is to the human race he has given the formation of its destiny, not to each creature for his own part only. If they suffer by mutual vice, they are made happy by combined virtue—in either case bearing the penalty, or reaping the benefit, of *co-operated* good or evil. That law of our nature whereby the happiness of each is made to depend on the happiness of all—ay, to make even angels weep when they see our fantastic tricks, and to produce a greater joy in heaven itself over one sinner that repenteth, is the most benevolent as well as the most beautiful feature of the moral government of the world. What a motive is it for the exercise and universal diffusion of philanthropy, to know, that it is a law of the warm heart, that its satisfaction is imperfect, so long as it beholds a single fellow-creature miserable. How wise is that system of mutual dependency, whereby selfishness is assured, that it cannot secure its own happiness, until it ceases to be selfish; and that statute, which, while it renders all the happiness, reason, and genius of man, the result solely of living in a state of society, or human alliance, makes it impossible that it can be a really peaceful existence to any, until each has made it a condition of unmixed felicity to all. In this world man is only comfortable when he is civilised—only civilised when he is social—social only when his enjoyment is dependent upon that of others; and, therefore, only truly happy, when happiness is all around him. The Lord of earth is the Lord of heaven, and the moral law of this world, will not be changed in the next.

The same evidence which proves that man was made upright, and that, too, by the very circumstances from which his perfectibility is inferred, that although a perfect stock may degenerate, an *originally* vicious stock will never become improved, leads to the deduction that he fell. An upright man, in Phrenological language, is one with a large brain—an exactly equal endowment of every organ, an absolute balance of the temperaments, and a corporeal constitution without flaw or blemish. But this very description of a perfect man, is just that of a fallible man—the slave of circumstances. As there is now no such being, degeneracy is demonstrated.

Metaphysicians have been at open and interminable war as to the nature and constitution of virtuous action; and although many, and ingenious, arguments have been used, on as many sides, the controversy remains, like all other matters of argument, exactly where the combatants found it. Paley has defined virtue to be the performance of actions by the command and will of God, for the sake of future happiness: and Dr. Chalmers, adopting the same principle, maintains that justice, charity, benevolence, perseverance, frugality, practised for their own sake, are not virtuous, and must be, therefore, either vicious or indifferent; and that the sole virtue of every action, consists in its performance being the result of a desire to obey the command of God. But if that only is virtue, which is done in order to observe the Divine will, nothing is vicious which is not done with the express intention to disre-

equitable, is a plain absurdity. As the idea of benevolence or justice in the Deity, is the idea of abstract terms—and as they have no existence in nature, but are invented by ourselves, our conceptions of their meaning being derived altogether from a classification of individual examples of certain similar emotions, and resembling actions in men, any act of the Creator, whose features bear no similarity to actions in the creature, which we have characterised by ascribing to them such terms, or which is opposed to them—or any emotion or sentiment in our Maker, which is contradictory of that to which we have applied the same abstract epithets in us, may be what emotion or sentiment shall so happen, but certainly cannot be what we mean by the same feeling in us; and, therefore, if it be not benevolent or just, according to our conceptions of these abstractions, it is not, in point of fact, so far as we know, either the one or the other.

If, then, our ideas of the attributes of justice or mercy in the Deity, be simply that he possesses, in an infinite degree, the moral sentiments of benevolence or conscientiousness, as they exist in man; and if they inhere in the nature of this highest moral agent in the universe, not in obedience to any law, but simply as impulses of his essence, is it to be gravely maintained, that if these attributes exist in the creature, actions proceeding from them are vicious or impure, because they are prompted by *his* nature, and not by the motive of obedience to the Divine commandments? If so, the Deity, who acts in conformity with no behest of a superior, must possess no moral qualities; for surely that is not to be expected of the creature, which is not to be found in the Creator. If, too, man be the image of God, he must possess, independently of the idea of the Almighty, a moral self-emotion and action; because virtue inheres in the character of Divinity, and must do so, of course, in his image, or counterpart, although in a degree less, in proportion to the distance betwixt the creature and Creator. All this, however, has been, and would continue to be, a mere matter for argument, in which the combatants, having no real gauge of victory, would both claim the triumph. But Phrenology settles the controversy, by a confident appeal to indisputable facts. It points out separate organs in the brain, independent of each other, competent to the discharge of the moral duties which severally relate to them, the handiwork of God, and therefore fitted for the special purposes to which he designed their application. It exhibits in the human brain, organs of Wonder and Veneration, competent to the production of religious obedience, but to nothing more. It lays its finger on the faculties of Benevolence, Conscientiousness, and Adhesiveness, capable of existing in activity with dormant piety, and involving those innate and supreme sentiments of love of truth, of our fellow-men, and of the subjects of our social relations, which form the prominent features in the moral injunctions of God to man; without which, Veneration, which produces subjection, would be unable to obey; and with which, even where piety is absent, other virtues may be sedulously cultivated and strictly observed.

Metaphysicians have as many theories of the prime motives of human action, as there are books on moral philosophy. Some solve the mystery, by illustrating the power of the love of fame; others, by the action of selfishness; many, by the idea of the perception of the fitness of things; and not a few declare for the existence of a moral sense, which is as confidently exploded by persons of equal acuteness. Phrenology alone is competent to arbitrate among the litigants, and shows them that there are organs which produce the love of glory—feeble in some, and powerful in many—selfish desires, and benevolent impulses, variously developed, and variously manifested; making human nature, not the uniform principle, for which all of them contended, and the web of life of such a “mingled yarn—good and ill together—that our virtues would be proud, if our faults whipped them not; and our crimes would despair, if they were not cherished by our virtues.”

But the science of which we treat, is not merely confined in its advantages to the solution of questions of speculative metaphysics or theology. By pointing out the physical causes of vice and crime, it promotes greater charity in the interpretation of actions, and more pity and kindness towards the vicious and criminal. Applied to judicial purposes, it would determine cases of insanity, and take many out of the catalogue of crime, and place them in the lists of lunacy, who are now punished as villains, but who should be treated as patients. It has the testimony of many physicians, to its efficacy in discovering the causes and cure of madness; and by showing that man's opinions are framed by his developement, and his belief or scepticism,

are the result of his cerebral conformation, it will prove the injustice of punishing non-conformity with civil disabilities, or inferring his dispositions from his intellectual perceptions.

It also lends powerful aid to the elucidation of the truth of history, to the testing of biography, and gauging the internal evidence of narrative. Thus, for example, upon reading the history of Saint Paul, prior to his conversion, the Phrenologist observes, that his character denotes a large developement of Destructiveness, Combativeness, Concentrativeness, Veneration, and Wonder. Had his biography been fictitious, a spurious conversion would have been made to change his whole character to meekness—to a stingless forbearance—to what modern saints are destitute of—energy, zeal, boldness, and power. An ordinary reader could not detect the imposture; because, possessing no knowledge of innate faculties, he would not see why both features of the conduct might not be the result of change of circumstances. Having no idea of the number or nature of the primitive dispositions of mankind, he could not detect the leading features of the character, or separate accidental traits of feeling, from those circumstances which indicated the predominance of certain original powers. But a Phrenologist, who is aware that events may change the *direction*, but cannot eradicate the *manifestation* of ruling passions, or that accident may call dormant feelings into action, but cannot prostrate those which already prevail, sees conversion turning the Destructiveness of the persecutor, into tremendous force of character—the Combativeness of the contentious bigot, into controversial polemics “hard to be understood”—the Wonder which trusted implicitly to the Prophecies of the Patriarchs, reposing in faith on the Cross of Christ—and the same excess of Concentrativeness and Veneration, which maintained the traditions of the Pharisees “after the most straitest sect,” persecuted a setter forth of strange doctrines, and hated innovation—now absorbing his whole soul in the task of reconciling the venerated antiquities of ancestral tradition, with his new faith, and prostrating him in profound devotion, before the God and Father of his Lord Jesus Christ.

Dramatic talent, in acting or sketching character, it has been reserved for Phrenology to discover, requires a large endowment of Secretiveness, the spirit of delitenecy. It bears undesignated testimony, therefore, to the truth of the statement of Bolingbroke, that Pope could not take his tea without a stratagem—sees the cause of Scott’s playing at bo-peep with the public—of the misery of Cowper and Addison, on being brought out from the dark retreat of their own concealment—and explains the masterly duplicity of Kean’s letters to a notorious Alderman.

Men die. The facts which form their life are distorted, lost, or misinterpreted, to suit the theory of their trumpeters or traducers. “The evil they do, lives after them; the good is oft interred with their bones.” But Phrenology exhumes the bones, and the good is made manifest. The lapse of many ages has not consumed the skull, and, therefore, has not lost the character of King Robert Bruce—left Hampden’s greatness and goodness without a witness—or Newton’s intellect without a voucher. Burns, Swift, Scott, Sheridan, Napoleon, Fox, Pitt, the mighty spirits of the mighty dead, it still preserves to the calm judgment of posterity; and a mere accident has deprived us of that skull of Shakspeare, which would have told us more of the chief of immortals, than the fables of all his biographers.

It was the boast of Cuvier, that if he were furnished with a single joint, he could, from that alone, predicate the structure and habits of the animal to which it belonged. Phrenology can do no more than this; for, from dead men’s bones, it can tell their living thoughts. Two thousand years have rolled over the skulls of ancient Egypt, and yet there are men who could read the fortunes of its satraps, as easily as Cleopatra. How long is it since Athens ostracised Aristides, and laughed over the farces of Aristophanes? Yet have we the power to touch, with our curious fingers, the brow of a denizen of the Acropolis, and a skill that enables us to tell what resided within this palace of the soul, with more absolute accuracy, than the orators whose greatness depended upon their art in moving all its hidden springs to the purposes of their busy hour. Nay, their very complexion is not hidden from us, but we are able to know somewhat of the swarthy visage, or the fair and rosy countenance. We also see the evidence of Paul’s complaint, that they were too superstitious, and ran about the city, exclaiming, What news? and can view the very effects of his labours, in contrasting the skulls of early Gentiles, with what 1800 years of Christianity has done to those of British civilisation. In its efficacy towards

the training of youth, the discovery of the tendencies of genius, and the knowledge of ourselves, the blessings of this admirable system are no less conspicuous. The vain, who pique themselves upon the possession of those very qualities in which they are deficient, will be undeceived by Nature herself, instead of through the suspicious medium of fellow-creatures, whose candour will be ascribed to jealousy or impertinence. The proud man, who mistakes superciliousness for becoming dignity, and pompous rudeness for the spirit of independence, will lower his tone to *truth*, although he may hold the judgment of his *fellow-mortal* in contempt. The benevolent and affectionate, but combative and passionate man, is, above all, the blindest to his own defects. The whole world is at war with him; but he, forsooth, is as peaceable as the lamb. He is never the aggressor. Some one else began first. His spirit of disputation, he mistakes for a purely intellectual perception of the fallacy of the opinions he combats; tell him that he is inveterately controversial, and he will make that an apology for a renewal of the interminable argument; hint that he is passionate, he will call you a liar, or knock you down; and when you prove your insinuation, by an appeal to your prostrate condition, he grumbles a justification, in which all that you hear is something about the patience of Job. This man may, in his own closet, be told of his failings, by a friend to whom he is more ready to listen—his own head—the only combatant with whom he could be induced to decline the encounter,—and by his own development, which will incite him at last to eschew all battles except one, in which he will be enabled to gain that noblest of triumphs, a victory over himself.

The great tendencies of human nature towards virtue, or towards vice, would, by this process, be ascertained with an accuracy which precluded discussion; and while the testimony of the blind traveller, who traversed the whole world, and declared that every where his helplessness was a passport to kindness—and of Wilderspin, who, knowing the inmost hearts of the twenty thousand children whom he taught, found much more of good than of evil—would be equally disregarded: the infallible standard of the heads of all nations, open to inspection, where mistake is impossible, would give the average of good or evil with unfailing precision.

The universal diffusion and recognition of Phrenology, would enable legislation to adapt itself to man, and to the peculiar state of society to which it fell to be applied, in a manner which is impracticable by a system which proceeds on no fixed principle. It would watch and test every criminal code, not by state expediency, but by the exigencies of frail humanity; and by a deep sense of the irresponsible weakness which produces much of its wickedness; speaking trumpet-tongued to that awful national injustice, which, finding subjects so much dependent upon the accident of birth and circumstances, takes no care that their constitution shall be improved, their moral education secured, and bad example removed; but, after having brought them into the world, condemns them to the torture or to death, for committing those crimes, which their persecutors took no pains to enable them to avoid.

Phrenology likewise enables us to analyse, with infallible exactness, the nature of actions, and to discriminate betwixt genuine morality and spurious honour. The love of glory, which men have conspired to deify, it shows to be a sentiment held by us in common with the brutes; and it conduces to humble our opinion of that species of dignity which it has discovered to exist in a turkey-cock, as well as in Coriolanus. The fame which all nations have thrown around the warrior, it has been the first to blast, by demonstrating that it is produced altogether by a predominance of the lowest and most animal principles of our nature; it tells the circle of the central orders of society, that duelling is no test of honour, but of the activity of tiger instincts; and that cowardice is perfectly compatible with the most exalted virtue, because the product of a fortuitous absence of what too often produces vice and crime. It shows that the greatest man is he whose feeling heart and able head have increased the comforts and elevated the minds of society, by proving that the faculties necessary for the production of such a character, are those which alone man possesses in a superior degree to the brutes; his competition with them in the respect of all those other qualities in which greatness has been hitherto supposed to consist, being simply in their relative endowment of those instincts in which a hero is at the best very inferior to a horse.

The causes which produce in men different principles of religious belief, are proved by this science to be innate, and to a certain extent inevitable. It explains to one

man why another cannot, let him be ever so solicitous, think and feel as he does; it shows him exactly why it is that he adopts one theory of theology, and his neighbour an opposing system; and by satisfying each that they discord by a dissimilarity of perception and understanding, not by antagonist hearts and opposing wills, it will make them agree to differ, and create, instead of the pernicious sentiment of toleration, which assumes a title to theological superiority, the better principle of a charitable equality. By making coming talents or dispositions, cast their cerebral shadows before, it forms a powerful aid to education, and enables both parents and teachers to see future greatness through apparent present obtundity, or to provide against a pronation towards some besetting sin, by careful instruction, and by convincing the pupil himself of his danger, the first and most important step in his progress towards safety.

In the choice of a pastor, it is not to be deceived by a first sermon, which may not be his own; or by an appearance of mild and amiable sanctity, which may be assumed to suit the occasion. It is capable of detecting the clerical jackdaw, and of plucking from him his borrowed feathers—seeing through a less promising appearance those solid abilities and sterling qualities, which wear well and last long—and preferring the man of real piety and fair talents, to the flash of that orator whose pretensions, however great, cover a capacity, which, like Slender's love, was small at the first, and which the deluded flock who chose him, will, by bitter experience, find to “decrease upon better acquaintance.”

In selecting individuals to fill important public offices for life, the election will be no longer, as it has been, a mere lottery.* That lawyer will not be appointed the judge of the land, who is merely distinguished for the extent of a practice founded upon his talents in making the worse appear the better reason, and on his success in obliterating all those sure and certain land-marks, which distinguish truth and honour from falsehood and villany. Nor will the rulers of a realm dare then to insult the people, by placing upon the sacred seat of impartial justice, which ought to be far removed from all odour of party prejudice, an incompetent officer, only because he has been the unscrupulous political partisan of the men whom a chance of the dice has placed for the time at the helm of state power. He will still be left to his “quiddits, his quillies, his cases, his tenures, and his tricks,” and reduced to plead, not before his predecessor or his former rival in the weaving of the mazy net-work of litigation, but in the august presence of that man in whom the discoveries of this science have enabled the people to detect that moral worth and sound sense, which his very honesty would not permit him to blazon in the public eye—too proud in his patient merit to descend to competition for general applause, with those whose forward arrogance scrupled at the use of no means which would compass the ends of their unprincipled ambition. The professions of the demagogue will not pass current with a constituency which can perceive through his liberal promises of the extension of popular rights, the haughty contumescence of concealed despotism. And if war must still be, the leader of armies and the chief of navies, will be chosen by

* Dr. Millingen expresses an argument, which we have often heard advanced and exploded in conversation, but never expected to see in print. “Let us for one moment conceive the possibility of our resolves and actions being dictated by a supposed Phrenological knowledge—a knowledge earnestly recommended to statesmen, and, indeed, to mankind in general. What would be the result? A diplomatic bungler would be sent on an embassy, because a minister or a sovereign, with a Phrenological map before him, may fancy that he displays the faculty of circumspection, or the sense of things; and a Chancellor of Exchequer be found in some needy adventurer, who possessed the organ of relation of numbers.”—Vol. II. p. 209. Now, any man, with a tea-spoonful of brains, can see that this is either a miserable truism, or a logical blunder, which a mere school-boy ought to be whipped for perpetrating. If Phrenology be false, or those who practise it be ignorant of its philosophy, it is extremely clear, that to reduce its principles to application in the business of life, must prove injurious, just as false doctrines in medicine, or an ignorant use of true doctrines, must produce harm. This is a truism, a palpable mare's nest. But if Phrenology be true, and “a minister or a sovereign” be possessed of a competent knowledge of its practical details, neither “the diplomatic bungler,” with “the sense of things,” (?) nor “the needy adventurer” (who, by the way, might be a very good Chancellor of Exchequer after all) who possessed “the organ of the relation of numbers,” could ever be the object of their choice. Dr. Millingen must possess a very circumscribed notion of the duties of a Chancellor of Exchequer at any rate, if he supposes that his excellence depends on his acquaintance with the multiplication table, or his power of beating the dux of a mercantile academy, in solving questions in the rule of three.

their cerebral development, and not by a state influence, which has often set over others, men whose feebleness of character rendered insubordination inevitable, and whose cowardice and imbecility involved all their followers in disaster and death. But in an especial manner will Phrenology render a service to truth and virtue, by silencing all the disingenuous exaggerations, by which the supporters of one political interest endeavour to exalt mediocrity, either in moral or intellectual character, into greatness and integrity; and all those infamous and wilful calumnies, by which the enemies of a public man blacken every transaction of his life, and even where the nature of his measures is not susceptible of dispute, attribute the worst of motives to the best of actions. The calm and dispassionate eye of the unprejudiced people, will settle his pretensions by an infallible criterion; and the time will come, when a glance at the development of the head, will resolve and determine the most secret meditations of the heart.

The last effect that the general reception and practical knowledge of Phrenology, by society at large, is calculated to produce, which we shall here enumerate, is one, the advantages of which are likely to be the subject of much contrariety of opinion, according as it shall present itself to different members of the body politic. This is its direct tendency to level all artificial distinctions, to establish those of nature alone, and to frustrate those attempts which have hitherto been but too successful to exalt the aristocracy, created by the patents of men, above that nobility of God, which bears on its open countenance the certificates of the imperial college of Heaven's high heraldry. Men are too apt to forget that rank is but the guinea stamp, and to mistake it for the pure gold of wit and worth. Where there are no visible, external, and natural distinctions, which point out to society the essential difference betwixt its wheat and its chaff, the public receive, with passive acquiescence, such signs of greatness as any one chooses to take the trouble of suggesting; and conspire, with tame submission, to continue the fallacies, and give effect to the dicta, which those whom chance has given the possession of the general ear may choose to impose, in the shape of that mouth honour, which, although only breath after all, is nevertheless accompanied by solid personal advantages, and important social privileges. Mankind take it for granted, that a rich man is a wise one, and hear with gracious approbation whatever proceeds from the lips of a lord, if it contain matter just barely sufficient to save him from a verdict of idiocy or furiosity. They are quite satisfied with the relevancy of the evidence of greatness, adduced by Don Whiskerandos, in the Critic, when he disproved the imputation of his being a beef-eater, by throwing aside his cloak, and displaying a fine waistcoat; and where there is no other rule for their guidance in the distribution of fame, it is not wonderful that glitter and show should be as good a passport to consideration, as any other test of consequence and respect. But Phrenology introduces a criterion of judgment, which will at once produce a moral revolution in society. It is not to be deceived by names, or to take for granted the resemblance which the painter in politics endeavours to associate betwixt the picture he hangs in the market-place, and the title which he chooses to ascribe to it. It will at once force an imperial imbecile, literally to "hide his diminished head;" it will enable society to pass by birth, and look to brain; it will invite it to find merit where nature has hidden it; and to send rank, and title, and stars, and garters, to that proper obscurity, from which, without honour, and wisdom, and genius, they ought never to have been permitted to emerge.*

* Even in the mechanical arts connected with cranioscopic observations, this science is of advantage, and its benefits are beginning to be felt. Portrait-painters, having a Phrenological eye, look for peculiarities of appearance in the heads of their figures; and what they find, is accurately transferred to the canvass. "It has been remarked," observed Mr. Combe, to his audience in Glasgow, "in reference to the extensive applicability of the steam-engine, that it affords equally the means of forging an anchor and making a needle; and it may be said with equal truth, that the applications of Phrenology are not less diversified. This science, we have seen, affords an accurate means of analysing human character, and regulating education and legislation upon rational principles; and an ingenious individual of this city, Mr. Anderson, has applied it successfully to a more humble purpose—that of the making of wigs. This application of Phrenology has been much laughed at, but there is really nothing the least ridiculous in the matter. I understand that all wigs are wrought on blocks of nearly the same form. Now, as the shapes of scarcely two heads are precisely the same, and as the differences in some cases are very great, it is quite evident, that, by such a process, it is impossible for the wig to be accurately adapted to the head of him for whom it is intended. I have visited

CHAPTER III.

SECTION I.—*Relevancy of Medical Objections.*

METAPHYSICIANS and theologians are not the only opponents of Phrenology, who have manifested more prejudice than logic. Their example has been followed by men, whose very profession and daily studies, ought to have suggested to them the indecency, as well as the irrelevancy, of preliminary difficulties, to the reception or consideration even of a system of classified facts. It is of great consequence that the real field of battle on which Phrenology is alone bound to accept from, or give to, its opponents a formal challenge, should not be transferred from the place where its tents were originally struck; and that the attention of the bystanders should not be diverted from the great object of the campaign, by a sham-fight of mere skirmishers attempting, by the dust which the struggle of their eleemosynary warfare throws up, to give it the appearance of the serious business of the main action. The first point upon which it has been customary to satisfy the doubts of Phrenological inquirers, is, that the brain is the organ of the mind; but this doctrine is not properly the fundamental basis of the science, being rather an inference drawn from certain phenomena, which it has detected; and although the assumption of this position affords many interesting sources of corroboration of Phrenology, still the latter is not necessarily dependent upon it for its existence, and could, hypothetically considered, be supported, although this proposition were never established. The history of its discovery demonstrates this. "Dr. Gall," observes Spurzheim, "endowed with great power of observation, viz. with large Individuality and Eventuality, from an early age was struck with the fact, that each of his brothers and sisters, companions and school-fellows, possessed some peculiarity of disposition. The scholars who first excited his attention, were those who learned by heart with great facility, and who frequently gained from him, by repetitions, the places which he had obtained by the merit of his composition. He observed that his school-fellows so gifted, possessed prominent eyes. He found this sign confirmed at different places where he studied, in all who excelled in getting easily by heart, and in giving correct recitations." Thus, Dr. Gall remarked a coincidence betwixt prominent eyes, and a memory for words. He did not inquire why; and even although he had ventured to assign a wrong cause for the phenomenon, the fact would have been true notwithstanding. So having observed that skulls of particular shapes always accompanied the manifestation of certain mental qualities, Phrenologists have inferred the brain to be the organ of the mind; but although they were wrong in this inference, it may not be the less true, that when the coronal surface of the cranium is high, the individual is exalted in his morality; and that when the forehead is low, and the skull small, he is unreflecting or idiotic. It will at once be seen, that, by this line of argument, plain men of sense would at once avoid the infliction of all those medical controversies, which are founded on the alleged want of correspondence betwixt cerebral and mental decay, or of parallelism betwixt the plates of the cranium; and of all those tedious enumerations of anatomical objections, which it is the practice of young surgeons to advance, who, in default of other practice, make patients of Phrenologists, and operate upon them, by the irksome exposition of every possible view in which they can suppose the existence of a frontal sinus, or of irregular thickenings of the skull, to militate against the reception of the science. Were it true that cranial protuberances indicated mental idiosyncrasies, these phenomena, although all on the side of the objectors, could not neutralise this coincidence; and although the brain were the organ of the mind, still did the shape of the skull not

Mr. Anderson's Establishment, and am much pleased with the skill and good sense with which he has surmounted this difficulty. When an organ is large, he makes a corresponding elevation on the block, by means of leather and tin-foil; and having brought the block as nearly as possible to the shape of the person's head, he works the wig upon it, and by this means necessarily succeeds in making a perfect fit. People may laugh at this if they please, but the idea is perfectly sound, and very creditable to the artist's ingenuity."

indicate the form of the intellect, all further inquiry would be useless; because the very hypothesis which regulated the investigation, would thus be subverted. Thus physiological, like metaphysical, *a priori* objections, may be answered by the same species of logic, an appeal from theory to experiment. In this fortress, Phrenology is entitled to throw up her entrenchments; but while the enemy beckons her to descend from her rightful altitude, she can afford to remit somewhat of her prudence, in confident reliance on her inherent strength, and she makes a sally to the plain, where victory awaits her courage, and hovers on her helmet.

SECTION II.—*Brain, the Organ of Mind.*

COULD mere authority settle the question of the relation betwixt mind and brain, we need to proceed no further in the demonstration; for the fact is admitted, or even asserted, by both physiologists and metaphysicians. Prochaska inferred, that, "in the new born infant, the muscles have the automatic movement, and not the voluntary; because *the brain is not yet in a state to think.*" Besides being maintained by such men as Hunter, Pinel, Haslam, Rush, Esquirol, and Foderé, "the part of our body," says Cullen, "more immediately connected with mind, and, therefore, more especially concerned in every affection of the intellectual functions, is the common origin of the nerves; which I shall, in what follows, speak of under the appellation of the brain." Dr. James Gregory observes, that "the brain is the primary organ of the internal powers." Blumenbach declares, that "the mind is closely connected with the brain, as the material condition of mental phenomena." Magendie affirms, that "the brain is the material instrument of thought." Abernethy readily concurs in the proposition, that "the brain of animals ought to be regarded as the organization by which the percipient principle becomes variously affected." Dr. Mason Good styles "the organ of the brain as the instrument of the intellectual powers." Locke recognised the principle. Dugald Stewart found, that "a certain condition of the body is necessary to intellectual operations." Dr. Thomas Brown held the brain "essential to life, and to the immediate production of those mental phenomena which constitute our sensations, and, perhaps too, modifying in some measure, directly or indirectly, all the other phenomena of mind;" while Ray asserted it to be "the palace royal of the soul, upon whose security depends whatever privilege belongs to us as immortal beings;" and Tissot, of Berne, contended, that "every one who thinks, and takes notice of his thinking, must be sensible that the brain is in action during the time of thought." In Italian, is used the term *uomo di cervello*, a man of brain, for a wise man. *Avere il cervello nella lingua*—to have your brains in your tongue—is to speak well, and act ill. Agrippa talks of *Homines quorum cerebrum est in ventre, ingenium in patinis*, translated by Shakspeare, as "this lord Ajax, who wears his wit in his belly, his guts in his head." "If you do not tread on your brains with the soles of your feet," is an expression, the reputation of the origin of which is divided between Hegesippus and Demosthenes. Cleland traces the verb, *censeo*, I think, from the word *kan*, the head. "*A grilli per il capo*," he has grasshoppers in his head, is an Italian expression, similar to the Scotch phrase, "he has a bee in his bonnet." Minerva, or Wisdom, issued from the brain of Jupiter. Faber notes, that "*caput cerebro vacuum proverbiale est in stupidos et ingenio carente*," preceded by Juvenal "*Tunc vacui capitis populum Phæaca putavit.*" Dr. Doddridge, in his Lectures on Ethics, asserts it to be proved, by four considerations, that the soul is seated in the brain. Wollaston affirms, "that the seat of cogitation and reflection, man finds to be in his head." Grove allows "that the brain is the great instrument, or condition rather, of thought and contemplation." Prideaux observes, that "Eumenes had the best *head-piece* of Alexander's captains;" and Addison explains, that when we say a man "has a fine head, we speak in relation to his understanding." Shakspeare, besides many other allusions to the subject, traces the following connection betwixt head and mind:—

"My brain I'll prove the female to my soul,
My soul the father; and these two beget
A generation of still breeding thoughts."

Rowe notices—

“Mind’s imperial seat, the head;”

which Byron calls—

“The dome of thought, the palace of the soul;”

and, to conclude this tedious enumeration, Gray, in his *Principles of Thought*, speaks of—

“*Superas hominis sedes, arcemque cerebri;
Namque illic posuit solium, et sua templa sacravit,
Mens animi.*”

We are only circumscribed in our citations of authority, by the limits of our work; for, in truth, selection is more necessary than accumulation difficult. From mere weight of opinion, therefore, we pass to weight of evidence in point of fact.

The first step in the progress of this position, is, to prove that disposition, reflection, and sentiment, depend upon organization.

The developement of the nerves of the senses, is in the *ratio* of their exercise. The optic nerve of the pup that is blind for nine days, is much smaller relatively than the nerves of the other senses, and palpably enlarges as sight improves. So the mind is feeble in the helpless corporeal state of infancy; enlarges, strengthens, and decays, as the body attains youth, manhood, and old age. Climate, food, health, produce an effect on the soul, when they have acted on the physical system. The hereditary transmission of constitution, disease, or feature, from sire to son, is not more palpable than the tradition of mental weakness or vigour, genius or vice. “The brave,” says Horace, “are the offspring of the valiant and the good; and the virtues of cattle and horses are transmitted from sire to son; nor do the ferocious eagles ever become progenitors of the peaceful dove.” The mind is liable to fatigue, as well as the body, and as is all that is dependent on material organization. Sleep that refreshes the one, invigorates the other; and neither of them is distressed when the other is sound. Difference of sex is the result solely of a difference of structure; and the sensations, dispositions, habits, and intellect, vary in the same ratio, the idiosyncrasy being perfectly uniform. In infancy, the organic and mental differences of the sexes are slight; but, gradually as they grow up, the dissimilarity of body and of mind increases and strengthens. The softness and roundness of the female begins to contrast not more with the broad, square, hardy appearance of the male, than her gentleness and yielding tenderness of soul, with his rough, flinty, and bold impetuosity. Each of the lower animals may be discriminated in its mental habits, by the peculiarities of its organic conformation: and when the chrysalis feels an instinct to crawl, it creeps along the ground; but that same creature learns the art and love of flight, the moment that nature furnishes it with wings.

Haller and Sæmmering prove the brain to be the organ of sensation and motion, by the following considerations:—

1. A nerve, when pressed upon, inclosed in a ligature, or divided, loses the faculty of exciting sensations: we may irritate the nerve below the injury, but the patient feels no pain. If sensation existed out of the brain, the nerve would not have been insensible.

2. Compression of a nerve at its origin, produces the same result. The olfactory, optic, auditory, or digital nerves, no longer convey their impressions; but they resume their functions the moment the compression is removed. So also, when pus accumulated on the *left* side of the corpus callosum of an individual, he became blind of the *right* eye, but recovered his sight on the removal of the discharge. Sight is, therefore, in the brain, not in the eye.

3. Sometimes pain is distinctly felt to proceed along the nerves, up to the brain, which is often effectually stopped, by intercepting the communication by a ligature.

4. When a limb is removed by amputation, the pain felt at the former seat of the disease still remains, although the leg and its nerves are absent. It is in the mind, therefore, not in the toe. But even although the foot remain, if the brain be compressed, the sense of pain, and all other senses, cease—resuming their functions with the removal of the pressure. The mind is thus in the brain.

5. The power of voluntary motion is stopped, the moment the brain is insensible from pressure, and is resumed whenever it is removed.

Dr. Darwin, in his *Zoonomia*, has noticed the case of a man, sixty years old, who enjoyed the sense of hearing during the first period of his life, and lost it at thirty. He stated, that, in his dreams, he always imagined that people conversed with him by writing, or by signs, and no one ever appeared to speak to him; hence, with the *perceptions* he had lost the *idea* of sounds, although his organs of speech preserved a feeble remainder of articulation. So, of two persons who had only been blind for a few years, neither ever dreamed of the perception of visible objects. These cases demonstrate, that, after ideas cease to make impression through the senses upon the brain, they cease to exist in the mind.

The phenomena of insanity furnish evidence of this doctrine. This malady often arises from severe blows on the head, which also produce idiocy and the loss of consciousness, leaving all the system perfectly sound, and affecting the brain alone. An effect upon the mind uniformly acts upon this organ. Fear, rage, hope, disturb the health of the cerebral mass, and madness follows. Lawrence "observed, after death, the heads of many insane persons, and had hardly seen a single brain which did not exhibit *obvious* marks of disease." Haslam pronounces insanity to be *always* connected with organic cerebral changes; and out of two hundred cases of this malady, noticed by Greding, one hundred and sixty-seven presented thickening of the skull, and organic affections of the encephalon. The multifarious dissections of Georget constrained him to offer similar testimony. Mr. Davidson, of the Lancaster County Asylum, examined carefully the heads of two hundred deceased lunatics, and scarcely met a single exemption from disease of the brain or its membranes, even where lunacy was recent, and death produced from other causes. In a hundred brains dissected by Dr. Wright, in the Bethlem Lunatic Hospital, disease was palpable; and Lallemand, who, in a few years, observed a greater number of cerebral affections than any other author, "soon perceived that they were much more common than is generally supposed, and much more imperfectly known than those of any other organ." A writer in the *Archives Generales de Médecine* (1825), states as the result of the examination of one hundred cases; 1st, that in the brains of those who die of insanity, change of structure is *always* found; 2d, that these changes are the result of inflammation, either acute or chronic; and, 3d, that there exists a correspondence betwixt the symptoms and organic changes. Foderé admits, with Mr. Home, that "the brain is really a *viscus*, which is connected, as an instrument, with the state of reason or insanity;" and that "a state of automatic *dementia* and idiotism is almost always accompanied by marks of flaccidity or relaxation of the encephalic organ." Cubanis and Morgagni, in their numerous dissections of the insane, almost always saw augmentation, diminution, or more frequently inequality of consistency in the brain. Georget is convinced "that few bodies of insane persons will be examined, without exhibiting *appreciable* traces of the affection of this organ." Insanity, then, is a cerebral disorder, produced frequently by mental causes; in so much, that national *dementia* is fearfully increased by theological or political convulsions, upon which supervene violent intellectual commotions. Such was the effect of the Reformation, the usurpation of Cromwell, the declaration of American independence, and the first Revolution in France, that parents became insane, or gave birth to frantic or idiot children. By an effort of the will, a priest, mentioned by Saint Augustin, could fall into an ecstasy, during which he became insensible to the pains even of the torture; and Cardanus, who affirms that he was similarly gifted, explains the mode in which it operated thus:—" *Et initium hujus est a capite, maxime cerebello, diffunditurque per totam dorso spinam, vi magna continetur; hocque solum sentio quod sum extra me ipsum; magnaquadam vi, paululum me contineo.*" Mendelsohn fell into a swoon the moment philosophy was talked of; and Pascal, by a fall from a bridge, ever after shuddered even in his room, conceiving that he was standing on the brink of a precipice. The mind having conceived a prejudice, it produces a palpable effect on the brain and body. The Roman ladies faint at the sight of roses; and Capellini mentions that he saw a lady fall into a syncope, on perceiving a rose in a girl's bosom, although it turned out to be an artificial one. So, a man whom the sight of a spider threw into fits, was equally terrified at the presentation of a waxen one. In like manner, a clergyman fainted whenever a certain verse in Jeremiah was read.*

* Amatus Lusitanus knew a monk who never went out of his cell when roses were in bloom, from the fainting which their sight produced; and a relation of Scaliger was similarly affected

The temporary insanity produced by the effects of opium, or ardent spirits, on the brain, brings this doctrine nearer to the proof of experiment; and the instantaneous intellectual brilliancy and vivacious wit, which the stimulus of laudanum on this organ exhibits, has rendered the declaration of the lady literally true, that she carried her talents for conversation in a pocket-phial. "A good sherris sack," too, "ascends me into the brain," and makes it "apprehensive, quick, forgetive, full of nimble, fiery, and delectable shapes, which, delivered o'er to the voice, becomes excellent wit." Madness is always accompanied with extreme heat in the head, and coldness of the feet—symptoms which are frequently complained of by persons occupied in prolonged mental exertion, and, of course, arising from the extra supply of blood attracted to the cranium, by increased mental action.† Other phenomena point to the same result.

A young man was brought to Sir Astley Cooper, who had lost a portion of his skull just above the eye-brow. "He was agitated by some opposition to his wishes, and directly the pulsations of the brain were increased, became more violent, and more blood rushed to the brain. If, therefore," he remarked, "you omit to keep the mind free from agitation, your other means will be unavailing in injuries of the head." An injury of the head laid bare part of the brain of a patient of Sir Charles Bell. When the mind reposed in sleep, the brain sank perceptibly into the cavity of the skull; when it resumed its consciousness, the brain swelled beyond the inner plate of the cranium; and when it was excited by animating subjects, it obtruded so much, as to produce cerebral rupture. By this index of the mental state, the physician was also enabled to tell the patient whether his sleep had been sound, or its depth interrupted by dreams. Morgagni knew a learned man at Bologna, whose nose bled whenever he indulged in meditation in a horizontal posture; and Malebranche, when reading the Cartesian Theory of Man, was seized with violent palpitations of the heart, in consequence of the effect which excitement of the intellectual faculties produces on the circulation. Dr. Pierquin of Montpelier, saw a case exactly similar to those of Cooper and Bell, in 1821. Blumenbach, who inferred that during sleep the brain contained less blood than at other times,‡ records another; and in the *Medico Chirurgical Review* for October 1835, the same phenomena are stated to have been presented in the case of a robust young man, whose brain protruded so as to disturb the dressings, and throbbed tumultuously when excited by pain, fear, or anger. Acrel trepanned a young man on the temporal bone, which is immediately over the organ of Acquisitiveness, and the irritation of the wound produced an irresistible propensity to stealing. "A man at the battle of Waterloo (Hennen's Military Surgery), had a small portion of his skull-bone beat in upon the brain, to the depth of half-an-inch. This caused volition and sensation to cease, and he was nearly in a lifeless state. Mr. Cooper raised up the depressed portion of the bone from the brain, and then the man immediately arose, dressed himself, became perfectly rational, and recovered rapidly." Dr. Brigham notices a similar case:—Richerand attended an old woman,

by a lily; Montaigne knew men who were more afraid of an apple than of a musket-ball; and Hippocrates recollected one Nicano, who swooned at the sound of a flute. The same effect was produced on Scaliger, by water-cresses; on Boyle, by the splashing of water; on Erasmus, by fish; on Tycho Brahe, by a fox; on Henry the Third of France, by a cat; on Marshal d' Albert, by a pig; on some by silk, by honey, by a leveret, by sweeping with a broom, by a bagpipe, and by the taste of meat.

† Dr. Andrew Combe gives the following narrative of an interview with a patient who was just reconvalescing from delirium, brought on by hard study:—"When I first went into the room, after he had been for some time in a state of repose, he was perfectly calm and collected, and answered every question most rationally; but after the lapse of three or four minutes, the stimulus of my presence and queries began to operate upon him by almost insensible degrees, and to rouse the brain to undue action, as indicated physically by a slight circumscribed redness of the cheek and glistening of the eye, and mentally by the interjection, at first, of a few vague and unmeaning words, and shortly after of whole sentences; reason, however, still maintaining the ascendancy, till in a minute or two more, the excitement became purely morbid, and the ideas totally irrational."

‡ Dr. Elliotson observes,—"Analogy renders it extremely probable that, during the inactivity of sleep, the brain having less occasion for arterial blood, has a less vigorous circulation than during the waking state; and we know, that whatever diminishes the ordinary determination of blood to the brain, or impairs the movement of the blood through it, disposes to sleep." Richerand, under a similar conviction, states, in treating of sleep—"While it lasts, the cerebral mass collapses, a sign that the flow of blood into it is remarkably lessened."

whose brain had been laid bare by caries. One day, while cleansing away the pus, he pressed downwards, when the patient, who an instant before answered his inquiries very correctly, became silent in the middle of a sentence; the respiration and pulse continued; the pressure was frequently repeated; and each time, the patient recovered her faculties the moment it was removed. The same author trepanned a man, whose faculties declined, and consciousness became more and more enfeebled, as the *pus* accumulated in the intervals between the dressings. In Chapman's Lectures, the frequent exhibition of a patient to Professor Westar's class is detailed, whose entire mind disappeared on the application of a similar pressure, and was held as it were under the thumb. But we are compelled to pass over the enumeration of an immense number of equally singular examples, in order to hasten to the following, recorded in Cooper's Lectures, which may teach bigotry a lesson of charity, and induce it to consult nature and the will of God, as expressed in his laws, before further dogmatising on the subject of materialism. A man named Jones, when capturing a vessel in the Mediterranean, received a blow on the head, and became insensible. From the vessel, he was removed to the hospital at Gibraltar, thence in a frigate to Deptford, and transferred to St. Thomas' Hospital, London. He lay constantly on his back, had been all along insensible, and breathed with difficulty. His pulse was regular, and each time it beat, he moved his fingers. Mr. Cline, the surgeon, found a portion of the skull depressed, trepanned him, and removed the incumbent bone. Immediately afterwards, the motion of the fingers ceased; and, in three hours, he sat up in bed, sensation and volition having returned; and, in four days, he got out of bed and conversed. *The last thing he remembered, was the circumstance of taking a prize in the Mediterranean.* From the moment of the accident, thirteen months and a few days, oblivion had come over him, and all recollection had ceased. He had for more than one year lived wholly unconscious of existence; yet, on removing a portion of bone which pressed upon the brain, he was restored to the full possession of the powers of his mind and body. Here the proof was conclusive, that the mind did actually stop like an unwound watch. For thirteen months, there was neither thought nor feeling. When the removal of a fragment of bone permitted intellect to return, the mind commenced exactly where it had left off, at the capture of a prize in the Mediterranean. 2, 309.

The correspondence betwixt cerebral and mental acquisitions, is strongly insisted upon even in the Edinburgh Review, where Dr. Gordon affirms, that "in precise proportion as we ascend the scale of creation, and the animal acquires a sense, a power, or an instinct, do its nerves multiply, and its brain improve in structure, and augment in volume; each addition being marked by some addition or amplification of the powers of the animal, until in man we behold it possessing some parts of which animals are destitute, and wanting none which they possess; so that we are enabled to associate every faculty which gives superiority, with some addition to the nervous mass, even from the smallest indications of sensation and will, up to the highest of sensibility, judgment, and expression." Lawrence also continues the evidence of the fact, not only that thought never existed without brain, but that the amount and quality of the one are the measure of those of the other. "The mind of the negro and the Hottentot, of the Calmuck and the Carib, is inferior to that of the European, and their organization is less perfect. The large cranium and high forehead of the orang-outang, lift him above his brother monkeys; but the developement of his cerebral hemispheres, and his mental manifestations, are both equally below those of the negro. The gradation of organization and of mind passes through the monkey, dog, elephant, horse, to other quadrupeds; thence to birds, reptiles, and fishes, and so on to the lowest links of the animal creation, the mental powers of all animals being proportioned to their organization." Dr. Neil Arnot, a *non* (if not an *anti*) Phrenologist, admits, that "an originally mis-shapen or deficient brain causes idiocy for life; and most cases of madness or eccentricity can now be traced to a peculiar state of the brain." Vimont, one of the first anatomists in the world, commenced an elaborate work on comparative anatomy, for the express purpose of overturning Phrenology, by undermining this essential doctrine. But so invariable did he find the correspondence to be betwixt brain and character, that he was converted to the science by his own treatise against it.

It is admitted on all hands, that there never existed mind where there was no brain, or a healthy brain where there was no mind; but this, it has been contended,

by no means establishes their mutual dependence. It is evidence, however, which we do not consider the less conclusive, when applied to other objects. Every part of the human body has been sanctified to the discharge of some peculiar function—the eye to see, the liver to secrete bile, the stomach to digest, the heart to circulate the blood, the lungs to breathe and to oxygenate. But these never make an exchange of labour. The eye never hears, nor does the ear see. Yet we have no direct testimony from the senses, that the lungs are the instruments of respiration, or the heart of circulation; the eyes of sight, or the ears of sound. But when we find the blood deteriorated by defective breathing, and its circulation rendered languid or accelerated upon a change of pulsation; that we are blind when the optic nerve is destroyed, and deaf when the ears are stopped, although we observe no other consequent obstruction; we consider this evidence of their function to be perfectly satisfactory and conclusive. The proof of the relation betwixt mind and brain is entirely similar, and, by parity of reason, must be equally entitled to reception. If the latter merely furnish the former with a knowledge of the external world; if it be simply the janitor or ground-steward ordered to show strangers through the policy, but not the proprietor of its acres, its office is little removed from the sinecure place of an aged domestic, whose imbecility is only fitted for the cares of keeping the gate. No one doubts that the ostrich digests, the eagle sees, the dog smells as perfectly with an ounce or two of brain, as man with several pounds. What employment are we to find for all that man possesses over and above the portion necessary to discharge the functions of sensation and animal life? Unless it be the exercise of intellect, the production of passion, the manufacture of emotion, the large and prodigiously developed hemispheres of the human brain are only of use to guard against a vacuum, or to shape the face with a nicer symmetry. We would then ask our facetious antagonist, if the mind have no relation to, or dependence upon, the brain, how does it happen that the one is never seen when not in the other's company, and a lawyer surely cannot dispute the axiom, that *de non existentibus et non apparentibus eadem est ratio*? How does he venture to speak of educating an immaterial entity, or of its pliancy, durability, elasticity, buoyancy, or weakness? What does he mean by the habit, custom, or exercise of a spirit? What can physicians possibly imply by the phrase, "physical education of the intellect?" We pause for a reply, and are likely to do so for some time to come, before one can be given that at all promises to be satisfactory.

SECTION III.—*Plurality of Organs and Faculties.*

BEYOND the simple truth, that the brain is the organ of the mind, even the ancients had advanced a very considerable way. They arrived at the further conclusion, which forms the second great proposition in the solution of the Phrenological problem, that the *whole brain is not employed in every mental act*; and that it consists of a *congeries of organs, the instruments of a corresponding number of mental faculties*, each possessing an individual and separate function. After the time of Pythagoras, who, with Democritus, placed sensitive and vegetative life in the blood, but the intelligent mind in the head; and of Plato, who assigned the viscera for the seat of the passions, and the brain for the mansion-house of reason; Aristotle pronounced the first or anterior ventricle of the brain to be the region of common sense—the second or central, that of judgment and reflection—while the third, or posterior, was appropriated to memory. The Arabians followed his division; as did Nyssenius; Nenesius, Bishop of Emesa, in the reign of Theodosius; Albertus Magnus, Bishop of Ratisbon; Bernard Gordon of Montpellier; Ludovico Dolce, in the thirteenth cen-

* "If the pure spirit within us," says Bishop Brown, "could think and reason independently of all material and bodily organs, we should never be tired with thinking; but, on the contrary, we find it to be a labour of the brain, and we find ourselves as much wearied with intense thought as with hard bodily labour." The same line of argument is pursued in a Theological Survey of the Human Understanding, dated 1776.

tury; and Peter Montagnana;* the two latter of whom, however, divided the brain and mind into six organs and faculties. Anaxagoras and Thomas Aquinas recognised a plurality of cerebral and mental powers, followed by Vieussens, Lancisi, and La Peyronie; and Saint Augustin, enumerated with some precision, those proper to man, and others which he shared with the lower creation. Serveto added 'one organ to those of Aristotle, as did Willis of Oxford. Hartley regarded each fibre of the brain as an organ of the mind. Degerando, in his theory of association, supposed that "a vibration which takes place in one organ is communicated to another, or to several, and awakens the impressions deposited there;" and Bonnet conjectured "that an intelligent being, who should thoroughly comprehend the mechanism of the brain, and should see in its minutest detail, all that is going on within it, would read as it were in a book. The prodigious number of organs, infinitely small, appropriated to sentiment and to thought, would be to such a being what printing-types are to us. We turn over the leaves of a book, we study them; this intelligent being would contemplate nothing but brains." Gregory of Nice, compares the brain to a city, "where the coming and going of the inhabitants occasion no confusion; because each one has his fixed point of departure, and definite place of arrival." Mundini, of Luzzi (in the 14th century) supposes that "cellules exist in the brain, each the seat of a distinct mental faculty." Malacarne discovered that intellect lay not in the medullary substance, but in the cineritious convolutions, the number of the folds indicating the variety of powers. Herder approached so near the Phrenological doctrine, as to point out the mode of discovery. Boerhaave deemed different portions of brain necessary for imagination and judgment, in which opinion he was confirmed by Haller, Galen, and Van Sweiten. Meyer of Frankfort, Prochaska, and, after them, Tiedemann, Wrisberg, Sæmmering, Chanelet, and a host of others, assigned a cerebral compartment to each intellectual power. In a work on Human Physiognomy, by Porta, a Neapolitan of the 16th century, a catalogue is given of faculties common to man and the lower animals, said to be drawn by Aristotle. He compares the heads of known persons with those of brutes, and manifests a disposition to adopt the inductive method of philosophising. Rhasis preferred a round head, compressed below each ear, and elevated behind. Albertus inferred from the form of the head of Pericles, that length of cranium indicated providence and circumspection; that a round head was without memory and wisdom; and that a long anterior lobe (*longa frons*) accompanied mental vigour and aptitude for learning. He also noticed, as a doctrine of physicians, that imbecility followed from a small head, and that Aristotle, in conformity with his own opinion, found irascibility the accompaniment of a thick neck and large inflated temples. Plutarch dilates on the length of Plato's anterior lobe; while Neanthes, on the authority of Diogenes, states that this philosopher received his peculiar name from his large face and forehead. This author observed the same appearance in Dante. Sir John Presbyter's works contain the following singular passage:—

"He had a geometric scale
To measure heads like casks of ale,
All for to find out the intentions,
Capacities, plots, and inventions
Of lawyers, doctors, quacks, and jugglers,
Of soldiers, sailors, cheats, and smugglers."

Huarte, a Spaniard, in a work dated 1580, maintained that each man is born with peculiar tendencies and talents, which correspond with a certain form of the head. The Marquis of Mascardi, President of the Neapolitan Criminal Court from 1778 to 1782, had studied the work of Porta, and seen the manuscript of Cabanis' physiology. Whenever a criminal condemned to death fell to suffer, but had not confessed, he ordered him to appear before him, whatever had been the strength and

* "Nel capo son tre celle
Ed io diro di quelle
Davanti e lo intelletto
E la forza d'apprendere
Quello che puote intendere;
In mezzo e la ragione
E la discrezione

Che scherme buono e male;
E lo terno e l'iguale
Dirietro sta con gloria
La valente memoria
Che ricorda e retiene
Quello ch'in essa viene."

Tesoretto of Brunetto Latini, preceptor of Dante.

respectability of the evidence on which his sentence proceeded, examined him attentively, and particularly his head, after which he pronounced his definitive judgment, in the terms of the following examples:—

"1st, Having heard the evidence on both sides, examined the countenance, and manipulated the head, we condemn him to be executed.—2d, Having heard the evidence on both sides, the panel having maintained his innocence on being put to the torture, and having viewed his physiognomy, and examined his head, we commute the sentence of death to imprisonment." Berard and Montegre, in their article, *Cranioscopie*, in the *Dictionnaire des Sciences Medicales*, in offering the most determined opposition to the system, declare, that "all admit the reality of organology: they hesitate only in regard to designating the organs."

If the brain be, as we have shown, the organ of the mind, it seems to follow as a necessary corollary from the plurality of the faculties of the latter, that the former must consist of a corresponding number of compartments. The economy of nature in the use of her instruments, is wonderful; and the very fact, that she does not employ the same instrument for any two varieties of *action*, shows that she cannot do it, and that, therefore, she is not able to produce complicated *emotions* from an individual organ. We cannot feel, and hear, and taste, and smell, by means of the optic nerve. Of this we are satisfied by the fact, that if the olfactory, and auditory, and gustatory nerves be destroyed, their relative senses no longer exist, although the optic nerve should remain unimpaired. As little, then, is it to be expected that men can love, or hate, or reason, or sing, or worship, by the agency of the same individual instrument. Physiologists know, that in the animal economy two nerves, even although inclosed within one mechanical apparatus, are necessary to the discharge of functions, whose action to our consciousness appears simultaneous, and almost identical, as that of motion and sensation;* and the tongue, for example, has, on each side, nerves of motion, touch, and taste. By fair analogy, then, the inference is legitimate and the deduction obvious, that, with the postulate of the proposition, that the action of the mind depends upon the brain, the complicated functions of the mental faculties, demand an equal multiplicity of cerebral organs. This receives countenance from evidence of a more satisfactory nature than that which may be derived from mere analogy. Richerand, in treating of the anatomy of the brain, observes, that "it is impossible to study an arrangement so systematic, without being impressed with the idea of design, and that this division of the cerebral mass into so many distinct parcels, so diversely conformed, is relative to the different parts each is to perform in the composition of thought." Vimont, Serres, Tiedemann, and Vicq d'Azzyr, have observed a distinct increase in the number of cerebral parts, with every proportionate rise in the intelligence of the animal creation, the various kingdoms of sentient nature, having each their own organs, and those of the grades below them, distinctly formed; so that, in the fish may be seen the exact brain of the insect, and additional lobes peculiar to itself; in the bird, that of the fish, with an increase of convolutions; in the mammiferi, that of the bird, and others peculiar to themselves; and in man, that of all the rest, and a distinct accession of better developed organs. Tiedemann has even traced in the fetal brain, first, distinctly perfected, the convolutions of the insect, then of the fish, bird, and beast, separately, distinctly, respectively, and successively developed, "until," to use the words of the Edinburgh Reviewer, "in man we behold it possessing some parts of which animals are destitute, and wanting none which they possess." It will subsequently appear, that the European brain does not form itself all at once into the perfection of civilization, but that it goes through the forms of the different inferior races of mankind—possessing in infancy an ample endowment of the propensities, and a very humble portion of either sentiments or intellect—the moral feelings being, invariably, the last to attain their maturity of development. Cuvier attests the same correspon-

* The discovery of the complicity of these nerves, is, perhaps, destined to explain many phenomena, of which no known hypothesis can solve the principle. May not somnambulism be caused by the activity of the nerves of motion, while those of sensation are asleep? And is not the magnetic sleep the result of the dormant state of these latter nerves—the former, and the brain, being awake? Walderstein of Gottingen, in his Diary, which records the agonies of his hypochondriasis, declares—"My misfortune is, that I never exist in this world; but rather in possible combinations, created by my imagination to my consciousness." "I was afraid I should become *all thought, and no feeling*."

dence betwixt increase of cerebral endowment, and higher mental manifestations. Chaussier finds in the brain, shades of colour: "Moreover, on examining it more closely, and cutting into it at different levels, and in different directions, it is observed to affect peculiar forms in many places—it presents a uniform arrangement, an extremely regular disposition of its parts."

One species of animals possesses faculties of which another is destitute—a fact only explicable upon the hypothesis of a plurality of organs. The beaver and the squirrel build; the dog, more intelligent than either, can only hunt. The horse has courage without cruelty—the nightingale sings—sheep live in flocks—the swallow, swan, stork, and fox, cohabit for life with only one mate, while other animals are indiscriminate in their attachments. The sexes have different forms, and mental idiosyncrasies; the male of birds can sing, while the female is unmelodiously silent. Were the brain a single organ, and all mental acts executed by the whole cerebral mass, it would follow, that wherever there was brain, every intellectual process would be performed indiscriminately. But so far is this from being the case, that the brain of the lamb produces uniform gentleness—that of the fox, cunning—and of the tiger, ferocity—manifestations which never change their owners. The human species manifest not merely additional mental power, but faculties, of which, in the lower animals, there are not even the rudiments. If, then, the brain be the organ of the mind, there, of course, must be additional cerebral parts to produce increased intellectual faculties; but if it be a single organ, then all its powers should be equally manifested, at all ages and seasons. It is certain, however, that children are not amorous; and that age is avaricious, while its memory fails long before any other function. The bird sings and builds and migrates only at certain seasons—there are times also of pairing; and the bee, ant, and beaver, only hoard at one period of the year. The premature and partial developement of some talents and faculties, while all others lag behind, is conclusive evidence of this position. Prodigies, as children are called who indicate early the matured state of some peculiar form of genius, are mere infants in all other respects. The infant Lyra, Master Aspull, Master Burke, Zhero Colburn, and George Bidder, excelled, in music, acting, and arithmetic, men of mature years, when they were aged only seven or eight. But while they astonished the world so long as they were at the harpsichord, on the stage, or at the slate, they were as childish, and as fond of play as any of the most stupid; and in any other department of knowledge than their own, they were mediocre or even dull.

Were the brain a single organ, and had the mind no variety of faculty, the *dictum* of Dr. Johnson would, and must hold perfectly true, when he delivered his oracular response: "Sir, there is no such thing as partial genius! A man can walk to the east with the same legs which carry him westward." But he himself admits that Cowley, Milton, and Pope, might be said to have lisped in numbers, and to have given such early proofs, not only of power of language, but comprehension of things, as to more tardy minds seemed scarcely credible. And how monstrous is Dugald Stewart's proposition, that all this is the result of particular habits of study or of business! Mozart found out musical concords at three years of age, and invented harmonious intervals: at six, composed intricate pieces and led orchestras. Pascal, at eight, perceived the propositions of Euclid, without requiring to demonstrate them. Haydn, at twelve, was celebrated; and at fourteen, Handel composed an opera which had a run of thirty nights. Newton, when a child, constructed windmills and watches. Pitt was a statesman before he was twenty; and the poem of the Pleasures of Hope, was published before Campbell was eighteen. Byron was equally precocious.

Even among the lower animals there exists in the individuals of the same species, an idiosyncrasy of talent or disposition, which cannot be accounted for upon the prevailing hypothesis. Out of the same litter of pups, one will be found stupid, another surly, and a third sagacious. The dog of De Coste, which wished to get near the fire, set up a howl, and when the other curs ran to see what was the matter, he quietly settled himself to his satisfaction. One horse, ass, mule, sheep, goat, or stag, is chosen by the herd, or by the proprietor, as leader, from its superior intelligence; and of a whole drove of cows, the property of Dupont de Nemours, only one could lift the bars which separated them from a field of wheat and maize. It was reserved for metaphysicians to speak of a good cow of business, or an ox of studious habits. Any one who peruses the narrative of the Pursuit of Knowledge

under Difficulties, will soon discover that genius forces its way in spite, not in consequence, of circumstances; and that while some in the most unfavourable predicament, are amiable, excellent, and honourable, others under the highest advantages, become abandoned and profligate. Caligula and Nero may be compared with Marcus Antoninus—and Louis XI. with Henry IV. Nations in the same way, distinguish themselves by peculiar features. Contrast France with England—Hindustan with Turkey—Athens with Sparta. Paul complained of the Athenians of his time spending their lives in going about the city asking for news; and at this hour, the Turks observe in the Greeks the same fickle and volatile character. Cæsar found the Gauls *cupidi novarum rerum*; and Tacitus describes them as gay, volatile, and precipitate, prone to rush into action, but without the power of sustaining adversity and the tug of strife. After an elapse of 1700 years (1679), Dr. Heylin observes—"the present French, then, is nothing but an old Gaul moulded into a new name; as rash he is, as headstrong, as hare-brained. In a word, he is a walking vanity in a new fashion." Tacitus describes the ancient Britons as cool, considerate, and sedate—possessed of intellectual talent, and a native aptitude, preferable to the livelier manners of the Gauls. He also ascribes to the ancient Germans, the very character which at present distinguishes them.

Partial insanity or monomania, as it is called, is a phenomenon only to be solved by this doctrine. "I am but mad," says Hamlet, "north-north-west; when the wind's southerly, I know a hawk from a heron-shaw." Had the brain been a single organ, he would have been mad at every point of the compass. Malebranche, in the zenith of his intellectual greatness, felt a shoulder of mutton continually hanging at his nose. An officer imagined himself a general, but after assuming a stiff attitude of command, he conversed on all scientific subjects with great good sense. A female thought herself possessed, but defended her positions with such successful sophistry, that Gall confesses he was not a match for her. A merchant got insane on the subject of his own affairs, but otherwise astonished all, by the brilliance of his conversation and the acuteness of his observations. A teacher of English continued to have the largest school in all Paris, after he felt so certain that the police were always in search of him, that he often was narrowly prevented from throwing himself out of a window. Similar facts occur in the history of accidental injuries, or congenital idiocy. A young physician, not remarkable for his talents, whenever he became drunk, improvised Latin speeches, singular for elegance of diction and refinement of thought. A dressmaker, mentioned by Van Swieten, in the access of a fever, began to make verses—a thing totally foreign to her usual habits. A lady not otherwise known to be musical, sang uninterruptedly for several days, in similar circumstances. Tasso composed his finest lines in a paroxysm of mania; and Pinel quotes from Perfect, the case of a female, who, during her insanity, composed with facility, beautiful English verses, which, in health, she had never attempted. Two Parisian idiots, sang correctly all songs that they heard; and the savage of Aveyron was singular for his habits of order. Cretins also often make passable watch and clock-work. A man remarkable for bad memory, fell from a considerable height on his head, and ever after could remember the most trifling circumstance. Another, from concussion, lost his memory for names; as did a surgeon, from a nervous fever. Dr. Beattie knew a learned man, who, from a similar cause, lost all his Greek, of which he was a master; and Dr. Abercrombie had a patient, who, in like manner, forgot his wife and children, but nothing else; while another, who remembered their persons, never again could recollect their names. Dr. Gregory remembered a lady, who, after apoplexy, knew every thing but names; while Dr. Brigham's patient forgot only places. Salmuth notices a man who had forgotten to pronounce words, but could write them; and one of Dietrich's patients, remembered facts and lost words, while another could not read, although he could write. Boerhaave knew a Spanish poet, whom a fever deprived of languages, and even the alphabet, while otherwise perfectly rational. Thucydides records, that several of the Athenians, after the plague, forgot their own names, and those of their parents and friends. Many of the French, at the retreat from Moscow, forgot their native country and their home. Valerius Maximus mentions an Athenian, who, after a blow on the head, forgot his literary acquirements, but remembered every thing else. A man wounded by a sword in the eye, forgot Greek and Latin. Artemidorus lost his memory from terror, occasioned by having put his foot on a crocodile. The soldiers of Anthony, on

their return from the Parthian wars, lost theirs also, after eating some poisonous plant; as did Bamba, king of the Goths, from a similar cause. The case of Dr. Broussonet, is still more striking. After recovering from an apoplectic attack, he could neither write nor utter substantives or proper names, in French or Latin, while adjectives and epithets crowded on him. When speaking of a person, he would describe his appearance, his qualities, and, without pronouncing the word *coat*, would name its colour. In his botanical pursuits, he could point out the form and colour of plants, but never could name them. Apoplexy, as every physician is aware, is altogether a cerebral affection; and there can be nothing more plain, than that were the brain a single organ, it must, if diseased at all, be so altogether. But we have seen, that so far is this from being the case, cerebral congestion may be so partial, that the recollection of only a part of the general memory for language may be the result.

How can the singular process of dreaming be accounted for, except upon the assumption of a plurality of organs? If the mind and its cerebral apparatus, were strictly individual, it is clear, that it must be altogether asleep, or altogether awake. Were it by the same faculty and organ that we reasoned, as by which we feared, or loved, or hated, we would reflect, when premises were presented to us whereon to build conclusions, as naturally as an awful occurrence would excite our terror, a friend our affection, or an enemy our hatred. Accordingly, all these emotions occur with un-failing and natural regularity, as the panorama of suggestion passes before the sight of our consciousness in broad day; because the whole brain, and the whole mind, are in a state of activity. Assume them to be essentially simple, and the same result must, as a necessary consequence, occur in the state of sleep, in the entire contrary direction. But so little is this the case, that in slumber the faculties which, at other times, form a regular disciplined and combined army of operations, now disperse, and each acts for his own behoof, like sharp-shooters; or they are like the guests at a bachelor's liberty hall, or the travellers' room at an inn—where each is differently occupied—one reading, another writing, a third eating, while a fourth, having just arrived after a long journey, is snoring, with his legs across a chair, unconscious of the presence of the rest, who are hurrying in and out, each upon his own peculiar business. In this state, we find ourselves in a passion, not only without, but against, reason, loathe what we love, and dread what, when awake, we despise. We find ourselves transported to the head of the army at the battle of Pharsalia, in which we contentedly receive, as a matter of course, a thousand anachronisms, and make, what we conceive, a magnificent speech, which, when we afterwards recall it to our recollection, turns out to be incorrigible nonsense. The most praiseworthy or indifferent action, we discover in sleep to be a horrid crime. We talk with the dead without surprise, and at our ease. The merchant finds himself picking his neighbour's pocket; and the cautious and prudent tradesman rushes, with inconsiderate rashness, into the very heart of a dangerous engagement. Were the organ of the mind single, does it not follow, that in all these cases, the reflecting intellect would be as active as the imagination and perception—each passion being regulated by its usual counter checks? Would not the cautious character of the sober handicraftsman, operate in his slumbers as in his waking hours, to expel the idea of war? And would not the merchant's Conscientiousness be as active in his bed as in his counting-house, and draw back his furtive hand from the gaping pockets which tempt his roving and sleepless Acquisitiveness, in 'Change Alley, or in presence of the shade of Sir Thomas Gresham? Hobbes, in his Treatise on Human Nature, solves the problem by this very hypothesis:—"In dreams, there is commonly no coherence, which must needs proceed from this, that the brain, in dreams, is not restored to its motion in every part alike; whereby it cometh to pass, that our thoughts appear like the stars between the flying clouds, not in the order in which a man observes them, but as the uncertain flight of broken clouds permits."

There is no better mode of reasoning upon any subject of physics or metaphysics, than that which assumes no ground for the soundness of one doctrine more than another, but which adopts that which best reconciles itself with existing phenomena. Newton had no better reason, in the inherent nature of the principle itself, for propounding the existence of a law of gravitation, than his predecessors had for their exploded theories. There was no higher warrant, from the nature of the thing, in maintaining that principle of motion, than any which had been previously sug-

gested. Nay, it was incapable of proof in any direct form, being equally impalpable with that attractive electrical influence, which is present or absent, without changing the qualities of matter in any shape whatever. But when, by assuming the existence of that law, all the phenomena of nature were found to reconcile with it; and when, without examining the principles from which the discoverer drew his conclusions, astronomers found, that by assuming their truth, they could accurately foretell the coming of comets—account for the corruscations of meteors—quadrate with them the movements of the universe, and those of the smallest atom,—they properly received this as ample evidence in support of the proposition. In like manner, if by assuming the hypothesis we have been endeavouring to illustrate, we can satisfactorily account for all mental phenomena, then by this rule of logic, we conclude the mind to be divisible, and the brain to consist of a congeries of organs. Assume for a moment, that there is a sentiment in the mind which makes a man fear, and a passion which spurs him on to fight, and we can perfectly understand how he whose life is passed in days of prudence, should spend his nights in dreams of rash adventure. His organ of Cautiousness may then be asleep, and that of Combateness, hitherto an incarcerated slave, may celebrate its jubilee of emancipation in awakened activity. And so, if there be an organ of Acquisitiveness, which prompts to the exercise of the appropriation *claus*, and another of Conscientiousness, which, in its upper-house, negatives every bill presented by such a party, it is plain how, when a man's entire faculties are awake, and both branches of his intellectual legislature sitting, he may be honest; while, when the Lords alone have adjourned their session, sleep may make him a thief or a rogue, when his organ of integrity slumbers, and his faculty of acquiring ranges uncontrolled through every scene of villany.

Change of character is only explicable upon the same hypothesis. We can imagine different faculties and passions in the same being, producing, as each predominated, opposite features of action; but we cannot account for a mind and a brain, single and indivisible, converting the prodigal spendthrift into the lean and hungry miser,* or turning Colonel Gardiner the debauchee, in a single night, into Colonel Gardiner the devotee. Sir Mathew Hale possessed a large endowment of the propensities, and also a powerful moral region, supported by large Cautiousness. Youth directed his actions in the channel of the society in which he was thrown, and giving loose to the solicitations of active passions—his superior sentiments not being yet excited—he became extremely sensual and dissolute. In an excessive debauch at a tavern, he finds that one of his companions, at his very side, has killed himself, by dreadful intemperance. His large Cautiousness is instantly powerfully excited, and stimulates by sympathy of circulation the moral sentiments in its vicinity. They commence their action, and abstract the circulation from the propensities, which formerly monopolised it. This, and this alone, will account for such a sudden, striking, and permanent change in his character and conduct.

"A war in the members warring against the law in the mind," is evidence of the action of two laws at least. "The good which I would I do not, and what I would not that I do," proves the prevalence of distinct principles of thought, as does repentance, of a faculty opposite to the tendencies of that which produced the act repented of. "I have changed my mind," is also an expression which demonstrates the consciousness of mankind of the truth of this proposition.

Bonnet has well observed, that "if fatigue ceases when the object of the mind's employment changes, the reason is, that other fibres (organs) are called into action." Why is it that the mind suffers lassitude from labour, but that its action depends on the brain? and why is it, that when exhausted with attention to one subject, it becomes immediately refreshed upon being occupied with another of a dissimilar character? The reason is plain, that it proceeds from multiplicity of organs, affording relief by variety of function and action, as the change of the exercise of one set of muscles for others which have been exhausted, at once restores vigour. Mendelsohn, whose intense study of one subject very nearly drove him mad, recovered by resting the exhausted organs, and confining his attention to the counting the

* A young man, mentioned by Foster, by lavish and reckless extravagance, squandered a large and very valuable estate, and became a beggar. He began to work as a common porter—toiled night and day—saved carefully what he earned—recovered by avarice the estate he had lost by prodigality, and died an inveterate miser worth £60,000.

tiles on the roof of the opposite house. A man of rank became insane, by intense and lengthened attention to one subject. He was cured by changing the nature of his pursuits; and declared himself, that he only prevented a relapse by preserving a diversity of occupation. A rich merchant met with a loss, over which he brooded so constantly as to become insane. The Reformation in Germany having broken out, he engaged in writing and preaching up the celebration of the mass; and, by this change of the current of his ideas, he became perfectly rational.

Such is a digested summary of what may be termed the preliminary evidence of this doctrine. The direct proof which the more peculiar facts of Phrenology furnish of this proposition, will be detailed in its proper place.

CHAPTER IV.

SIZE, THE MEASURE OF POWER.

SECTION I.—*General Size of Brain the Measure of General Power of Mind.*

THE next step in the progress of our introduction to Phrenology, is the demonstration of the proposition, that the size of the brain, in whatever direction developed, is the measure of general mental power. If it be in the direction of the propensities, the individual will manifest power of animal passion; if in that of the sentiments, the momentum will be of a moral kind; if in the anterior lobe, it will produce superiority of reflection; and if in all regions, it will result in a universal greatness.

In mechanical philosophy this is an axiom, and, in truth, amounts simply to the proposition, that a whole is greater than its parts. To deny that increase of size produces an accession of power, is to maintain that nothing is equal to something. If a ball of a foot diameter were of no greater force than one of an inch, then, by taking eleven inches from a ball a foot in diameter, nothing is taken from it; while, if the inch be taken from the other eleven, nothing is abstracted likewise; or, in other words, of two somethings there results nothing.

Where the other qualities of bones are the same, the largest are always the strongest; if each fibre in a muscle give a certain amount of strength, of course the greater the number the more the capacity; and thus the left ventricle of the heart, twice the thickness of the right, propels the blood twice as far and as forcibly. So of capacious, in contradistinction to circumscribed, lungs, and of a small or large liver and kidneys. The relative size of the nerves of motion and sensation in all animals, bears a uniform proportion to their tactile or motive capacities; and wherever, as in birds, weight is inconvenient, the *nerves* of motion are enlarged; but when bulk is of no consequence, as in fishes, the *muscles* are increased. The senses are under the operation of this same law, their keenness being always in proportion to the extent of nervous surface exposed, or the number and depth of the convolutions. Nay, so uniform is this correspondence, that a cessation of the exercise of any sense produces a diminution of the corresponding nerves. Desmoulins, who observed that the optic ganglions of the eagle occupied a third of its whole brain, found that confinement in the Menagerie at Paris had obliterated in it all the numerous nervous folds, leaving the retina single, as in the eye of animals of ordinary power of perception. Ophthalmia, in another case, had left the retina quite smooth, without the vestige of a fold, and the optic nerve reduced by two-thirds. Magendie, by excluding light from a pigeon for twelve days, produced the very same effect.

Wherever power is exerted, either in the muscles or the brain, there also will be found an increase of size, as if the former could not operate without pushing the latter before it. Brigham finds "that the weak mind manifested by the infant, and the feeble mind by the aged, are produced by a small and undeveloped, or an enfeebled or diseased brain." The encephalon of an adult, he remarks, weighs about three pounds five ounces, apothecary's weight; but if his mind "*have been long devoted to thought*, or if he have been engaged in constant study, his brain is usually

increased beyond this weight. The brain of Byron, for instance, is said to have weighed three pounds eight ounces; and that of the illustrious Cuvier three pounds ten ounces four drachms and a half." "The size of this organ," observes Andral, increases from the time of birth till manhood; remains stationary from this period till old age, and then diminishes in bulk and weight." "Infancy," says Bichat, "is the age of sensation. As every thing is new to the infant, every thing attracts its eyes, ears, nostrils, &c. It was then necessary that the nervous cerebral system should be adapted by its *early developement, to the degree of action which it is then to have.*" "On examining the heads of those," states Meckel, "who have died of rickets, the brain is found very voluminous, but ordinarily healthy. Being thus augmented in size, increased mental power is the consequence." M. Monfalcon finds, that "rickety children have minds active and penetrating; their wit is astonishing, &c. Their brains enlarge in the same manner as the cranium does." Professor Horner of Pennsylvania, notices, "William M. whose head at birth was of ordinary size, but very soon after grew so inordinately that its size attracted attention. When fifteen months old, he spoke well; at eighteen months, he manifested considerable musical powers. His intellectual faculties generally were very respectable, his powers of observation remarkable, and his memory surprising. He preferred the society of his seniors, and his sentiments and affections were of a lofty character. He died at the age of eight, and his brain measured 28 inches in circumference." "L. H. aged 14, exhibited," according to Munro, "more maturity of understanding than is common at his age, and preferred study to the usual amusements of children. On opening the body, the brain was found very large; its vessels turgid with blood." Dr. James Johnston found that "premature developement of mind is owing to the premature developement of brain." Charles Londe avers, that "the moral and intellectual man depends upon the physical; that the mental faculties depend upon certain organs, and the exercise of these organs develops them." Passing over what might be called the interested testimony of Bronssais and Caldwell to the same effect, as also the words of Dr. Thomas,—the author of the article *Hydrocephale* (*Dictionnaire des Sciences Medicales*), states, that "the heads of great thinkers are wonderfully large; and it has been ascertained by admeasurement, that they frequently continue to increase until the subjects are fifty years of age, and long after the other portions of the system have ceased to enlarge." "This phenomenon," remarks M. Itard, "is not very rare even in the adult, especially among men given to study, or profound meditation, or who devote themselves, without relaxation, to the agitations of an unquiet and enterprising spirit. The head of Bonaparte, for instance, was small in youth, but acquired in after life a developement nearly enormous."

It does not always follow that the largest skull contains the greatest quantity of brain. The optic nerve of the eagle is eight times as large as that of other animals; but it is contained in a much smaller space than that of the horse or the dog. So, a skull may contain a much greater quantity of cineritious matter, exposed to the inner surface of the *dura mater*, where the folds are much multiplied, and the *sulci* deep, than where, as in hydrocephalus or idiocy, the brain is unfolded, and without convolutions. Thus the average weight of male adult brains is three pounds five ounces and a half; but Byron's, whose head was said not to be large, was three pounds eight ounces; that of Cuvier, three pounds ten ounces four drachms and a half; and that of Rammohun Roy, nearly four pounds. Size of brain is, therefore, not *altogether* measured by that of skull, but by the number of folds and depth of convolutions; a matter, as shall be afterwards explained, to be ascertained from temperament and developement.

The skull of an infant is less than that of a child; the latter smaller than that of a boy; a boy's less than a woman's; and a woman's not so large as that of a man: all in exact conformity with the amount of intellect and force of character manifested by each. The crania of many full grown idiots are much less than those of even infants; and there never existed reason in a brain that was diminished beyond the point of sixteen inches in circumference. "The volume of brain," says Magendie, "is generally in direct proportion to the capacity of mind."

All men whose greatness has stood the test of ages—who put their stamp and impress on society—who are the leaders of mankind, and "wield the fierce democracy"—or whose personal character truly changes or impels the progress of political

history, or of the human mind—all these point themselves out at once by nature's mark of a large head, indicative of a great soul. Such a head is Napoleon's, Wellington's, Scott's, Franklin's, Fox's, Cuvier's, Cromwell's, Bacon's, King Robert Bruce's, Charlemagne's, Shakspeare's. Such is that of Washington, Jackson, Burns, and Hampden, whose power and influence Virgil had anticipated in this fine description:—

“Ac veluti magno in populo cum saepe coorta est
Seditio, siveitque animis ignobile vulgus
Jamque faces et saxa volant, furor arma ministrat,
Tum pietate gravem ac meritis si forte virum quem
Conspexere, silent, arectisque auribus adstant:
Ille regit dictis animos, et pectora mulect.”

Daniel O'Connell, who, without any political influence, in spite of political power, placed in the midst of every disadvantage, and by a sheer, moral, personal, and intellectual force of character, has become, by the suffrages of the willing hearts of his countrymen, the virtual sovereign of seven millions of people—has been called the Member, not for Dublin, but for Ireland—who has 73 Members of Parliament willingly at his command, without a pension to promise, or a place to offer—without a farthing to bribe, or patronage to bestow—who has been said by the Duke of Wellington, to possess more power than has been in the hands of any man since the Revolution—and who has been the first statesman having those wonderful powers for effecting the easy operation of combined political masses of Irishmen, which no one before him had ever been enabled to accomplish—this Daniel O'Connell has the largest head of any man in sound health in the kingdom.* Joseph Hume has also an enormous head; and his energy and influence have produced a greater effect on the government of the country, and on its political aspect, than has been caused by almost any other man. Yet Shiel is a far more accomplished orator than O'Connell; and Jeffrey, as a speaker and writer, outshines Hume by a thousand degrees. Why has the former “no place” in the political race? and why did the latter sink, in the House of Commons, to utter insignificance? Because, possessed in large endowment with the development of those intellectual organs which shine in literature, and make the accomplished speaker, these gentlemen had brains of not nearly the same size as those of their contemporaries; and, in particular, were not

* It has been said, that O'Connell owes this power to the priests—while others contend, that it is his country's wrongs which have made him great. But this does not disprove the reality of his personal force of character. Why did no other *Irishman ever make the influence of the priesthood available to the regeneration of his country?* And why did her wrongs, which have been much less since his greatness commenced than they were before, not make the political fortune of some other orator? The answer is plain—because no other man ever possessed the same tremendous energy of purpose and Bonapartean genius, in wielding, organizing, and manœuvring immense masses of Irishmen—a people less skilled in the principles of combined political movements than any nation in Europe. Scotland, with a million and a half of inhabitants, has been free and comparatively independent, by the nation, on the threat of peril, all acting together. Ireland, with seven millions, has been enslaved, until O'Connell taught her, that the secret of freedom lay in the spirit of union, a lesson which no other school-master could be found effectively and practically to inculcate. While all the regions in O'Connell's head are large, the passions are evidently the most powerful. Amativeness, Philoprogenitiveness, Concentrativeness, Adhesiveness, Combateness, and Destructiveness, are immense. Thus it is, when he addresses the people, he speaks under the impulse of an organ of each passion, larger than that of any man who hears him; and as he alternates from the outbursting of one emotion to another, he rules each mind by its own peculiar sympathies—for, while to the contentious and destructive spirit, he furnishes satire, invective, deep-set anger, to the patriot he speaks of his own dear island—to the social being he responds with friendly warmth—to the father and the mother he appeals with the melting tenderness inspired by the domestic hearth—and to woman he whispers in the gentle and kindly voice of sublimated love. Hence, no man can hear him speak and not be moved, or even can doubt his sincerity when touching on such topics. Hence, what he says, is not nearly so effective in print as the orations of many others; because, the tone direct from the heart, cannot be conveyed to the mind in a newspaper. But no one who hears him, can ever doubt of his being a very great orator. What a contrast is the effect of his speeches to that of Dr. Bowring's—who, with a fine intellect, great accomplishments, and a mind truly poetical—has a development of the moral sentiments that drowns the power of the weak and hungered passions! How cold and forceless are his effusions in comparison to those of the “Great Agitator,” as he may well be called, of the troubled passions, and the intense feelings of man, whose soul he works to any purpose that he wills!

endowed with an equal amount of those passions and sentiments, the great force of which producing moral and intellectual momentum, is the true secret of moving the masses of the community. They could do nothing in the shape of permanent influence with a mob, or a nation. Dr. Chalmers, who may be called the O'Connell of the Church of Scotland, has also an exceedingly large head. Swift, the Dean of Saint Patrick's, had almost as much influence with the common people in Ireland, as Saint Patrick himself. His brain was greatly above average. Dr. Johnson was equally singular for his large head, and his power of character. So of Captains Parry, Franklin, &c.

Men in no situation will be found to submit implicitly to the dominion of persons with heads below an average size. A judge appointed from interest, and not from merit, has, on this account, actually confined some of the bar for contempt of court. It is the same in college, in the army, the navy, the church—every where. An insensible impression of insignificance obliterates that instinct of subordination which is at once felt, under the command of large-brained men. Hence it was that the English never could permanently subjugate the bigger-headed Scotch—or the Germans the Swiss; while thirty or forty thousand British, command one hundred millions of Hindoos, with heads one-fourth less than their own, with the most perfect ease, and assisted by a spirit of willing subjection and subordination. Nature, however, is ever consistent with herself. A Brahmin of this small-headed and enslaved nation, renounced idolatry, studied Christianity, became a profound Greek, Latin, Hebrew, Sanscrit, Persic, and Arabic scholar, and obtained a mastery of the English language. In this tongue he has written several works, singular for their elegance of style, erudition, and power of argument. He has beaten the Bishop of Calcutta in Biblical criticism, and converted an English missionary to Unitarianism, who had been sent out expressly for the purpose of making him a Calvinist. This great man—the Rajah Rammohun Roy—had a head twenty-five inches in circumference, being larger than that of any man perhaps in England; and had India possessed many such, Europe would have had more cause to tremble for Oriental invasion, than to send her conquests into the East. While the head of the African slave is much less than that of his white master, the cranium of Toussaint L'Ouverture—who for a time bade defiance to the whole power of Napoleon, and that too with means which, in the hands of the latter, would have been totally inadequate—who was a model of wisdom, of heroism, of romantic generosity, and the most exalted virtue,—is one of the largest and most beautifully developed that we ever beheld.

We have seen that the Hindoos yielded to European sway, and the American Indians, as well as those of the Brazils, whom the missionaries, according to Koster, “always regard as children,” have fought under the banners of the very invaders. They have heads much smaller than the British. But the Charibs, New Hollanders, and New Zealanders, whose cerebral mass is about as great as that of Europeans, although developed in a different direction, have never been subdued, and contemplate strangers with neither fear nor respect. They may be killed, butchered, betrayed; but no influence hitherto discovered, has had power to subdue their hearts to the yoke of men like themselves. The Caffres and Ashantees, further advanced in civilization, and with heads also of large dimensions, have been indomitable, and have uniformly maintained a not unequal warfare with the better skilled and civilised Dutch and British settlers. The Chinese, with heads still larger, have never been subdued, and view Europeans with contempt.

Cromwell and Peter the Great, with no powers of oratory or pen, became by far the greatest men of their time, by very large brains. Linn, the Irish parricide, had an enormous head, developed chiefly in the animal region, and he ruled the whole common people of Belfast with a rod of iron.

In Pericles, who was so great a man that his name forms the epoch of an historical era, the head was so singularly large, that Plutarch says—“Sometimes he was to be seen sitting in the street, *fatigued by the weight of his head*, and not knowing what part to take in the disorders of the state; and at other times thunder and lightning issued *from his monstrous head*, with a tremendous noise.” His cranium was so much out of proportion to a handsome body, that sculptors always covered it with a casque. Brown, in his *Vulgar Errors*, says—“I did, I confess, somewhat doubt that man proportionally hath the largest brain, and think it might have failed in birds; but upon trial, I find it to be very true.” “A very large head,” observes the

author of Oriental Field Sports, "is considered throughout India as one of the most precious gifts of heaven. An enormous skull is absolutely revered, and the happy owner is looked up to as a superior being. To a prince, a jolterhead is invaluable." Gorton states, that Tamerlane had "a wide forehead and a large head." So he speaks also of Tasso. The great Malcolm III. was called *Can-more*, or big head. There is a Highland proverb, "A big head on a wise man—a hen's head on a fool." The proverb, "Big head and little wit," is thus alluded to by Kelly, "A groundless assertion—an eminent instance to the contrary, was John Duke of Lauderdale;" and by Ray, "This is only for the clink's sake become a proverb; for, certainly, the greater head the more brains, and the more brains the more wit, if rightly conformed." The Latin word *capitalis*, big-headed, means, ability. Thus, Cicero, "*Siculus ille capitalis, creber, acutus, brevis, pene pusillus Thucydides.*" And Ovid,

*"Nominis in dubio causa est, capitale vocamus
Ingenium solers, ingeniosa dea est."*

To the same effect, is the word "Cerebrosus." The Highland expressions, "May you live to rive your father's bonnet," or, "You will never fill your father's bonnet," recognise the same doctrine. Petrus de Albano, after stating that the male head is larger than the female, adds, "*magnum caput sensum adauget, virtutemque et magnificentiam denotat, et vice versa. Caput quidem breve sine virtute et sapientia hominem denotat.*"

Upon this subject a very copious series of observations has been made by one of the most extensive wholesale and retail hat-makers in London. He quotes the medium size of the male head at 21 inches circumference, which he finds in England to be the extra size of the female head. "Commencing with London, a perceptible difference will be observed betwixt the higher and lower classes of society. In the former, the majority are above the medium, while among the latter it is very rare to find a large head." "Establishments at the west end of the town, confined exclusively to the service of the higher circles, require more large hats in proportion than other hatters, whose trade is confined to the middle ranks; and again, the business with the lower ranks, presents the same relation to the class above them, requiring a greater proportion of small hats than either of the other classes." "The scale of measurement in furnishing a Scotch regiment, is larger than that required for an English regiment." "I met with the following order, from a correspondent in the north, for 220 yeomanry caps, 'Pray be particular in the sizes—let the majority be large. Once more I must tell you, not to send hats 6 $\frac{3}{4}$, or 6 $\frac{7}{8}$, without orders. I have now more than I can sell for twelve months.' Then follows a list of sizes, all above the English medium." "A manufacturer," he continues, "at Manchester, received an order from a London house, to send off immediately a particular quality of hats. Having the same description of order ready packed for Scotland, he sent off that package promptly, to oblige his London correspondent, without any regard to the sizes, to the Metropolis. To the mortification of the individual to whom they were invoiced, they proved to be perfectly unsaleable, from the whole of them being very large in sizes; the consequence has been, that nearly the number of hats sent, from their extra size for the lower trade, remains to this day on hand." A Dundee wholesale dealer corroborates these statements; and another observes, "New blocks had to be made in France of a larger size for the British army; and it was some years after the peace, before Parisian hatters could fit English gentlemen who applied to them." A glance at the House of Commons, or the General Assembly of the Church of Scotland, the members of which are either chosen by the people, or have risen to be their teachers by superior force of character and might of mind, will convince the spectator of the fact, that their heads are far above an average size.

The enlargement or diminution of the head, as the intellect expands or recedes, and of particular portions of the skull, as peculiar faculties are exercised or permitted to become dormant, is proved by an extensive series of casts taken by Mr. Deville, of the same individuals at various periods of life. Mr. Combe was guardian to an individual whose mind gradually became more imbecile, and whose head diminished so nearly in the same ratio, that he himself remarked it when he found he required each new hat smaller than the last; and accounted for it on the principle that the grosser particles were absorbed; and that he was gradually becoming alto-

gether spiritual, when, in truth, he was turning every day nearer the state of an idiot.*

SECTION II.—*The Doctrine of the Temperaments.—Are they a condition of Power?*

WHILE size alone can produce what we have attempted to describe under the general term Power, it is said that there exist other conditions in the physical economy, which modify or determine the action of that power, according to the different degrees in which they prevail in the individual. These conditions are styled by physiologists, Temperaments, and are, says Mr. Combe, "indicated by external signs, which are open to observation.

"The first, or Lymphatic, is distinguishable by a round form of body, softness of the muscular system, repletion of the cellular tissue, fair hair, and a pale skin. It is accompanied by languid vital functions, with weakness and slowness in the circulation. The brain, as part of the system, is also slow, languid, and feeble in its action; and the mental manifestations are proportionably weak,

* We feel convinced, that the rudiments of the science of Phrenology will be defective, until the astonishing facts, recorded in the annals of Animal Magnetism, are more carefully investigated, and reduced to some great common principles. There are phenomena in the science which forms the subject of this work, altogether unaccounted for; and yet the existence of which, until solved, forms a barrier in the way of successful progress. The causes which make light and heat such powerful elements in increasing all our mental susceptibilities, it is evidently of vast importance to ascertain. Above all, before every other department of the study, we should endeavour to discover the principle by which an effort of the will, an excitement of the feelings, or a powerful action of the mind, produces either death of the body, or its restoration to long lost health and vivacity. We shall probably be met with the usual answer, "It is the influence of the imagination." But this does, if any thing, increase the difficulty; because, how the fancy should destroy all structure, or revive and re-erect structure which has been impaired, is a question as remote from solution as any in the whole Tusculum of Psychology. How was it that the Prince of Orange, at the siege of Breda, by a few phials of sham medicine, restored thousands of his army, who had been long lingering under the most acute diseases? How was it that Davy cured a man of palsy of long standing, by simply making him believe in the salutiferous effects of a thermometer? How is it that hundreds of real cures have been effected at the tombs of saints, and that the sacred wells of Ireland are every year the witnesses of the entire restoration of pilgrims to health, from the most obstinate and enduring maladies? If the cuckoo note, "Imagination," be still sounded, our answer is, that fancy is the ablest physician of the faculty. The disease real, the cure real, and the doctor — credulity. Wonder has its seat in a cerebral organ; this organ communicates a healing action to the rest of the system, and the malady is obliterated. Thus the action of faith, in a mental organ of the brain, actually alters, by renovation, the corporeal structure. Again, the confidence of the physician gives confidence to the patient; and the doctrine of Burton, Hyperius, and Comineus, "that no physicians can hope for success, unless with a true faith they call upon God, and teach their patients to do the like," is perfectly good even in a physical sense; for faith, by both doctor and patient, in the efficacy of the means of cure, through the blessing of God, is nearly an essential of success—by its powerful effect on the imagination—a faculty that has often made men and women take fever from the mere fear that they would take it; and has as frequently protected them, by their own sense of security against its contagion. The brave resolves of one man, inspire dauntless resolution in another; fear is epidemical; suicide and hysteria become contagious; religious enthusiasm prevails for a time in an entire nation; the thirst of blood seemed to animate the whole of France; and every man in England suddenly became a hero. Why, and how was this? We shall be favoured with the usual reply, "Sympathy." How can there be a mental contagion, and a sentimental plague, sweeping over an entire country? How is it, that if an assembly consist of a dozen persons, each feels languid, and without interest, but that if the place be filled, the mutual energy and animation is increased a thousand-fold? How is it, that a man, to excite rage, or fear, or pity in others, must frown, and tremble, and weep himself—that he may use all the same words and in the same manner, but if he want his enthusiasm, his exertions will be abortive? How is it, that a man of a small brain may say the same thing much better, and with as intense feeling as he can command, than a man with a large brain, and that the former will, in a few sentences, not be attended to; while the latter will rivet every eye and every mind, as was well exemplified at the O'Connell banquet in Edinburgh? We see no such extravagant impossibility in the idea that all this action by one mind, and will, and voice, on another—in the same way as palsy is cured by the action of wonder, or some other organ on the nerves of the individual system—is produced by some cerebral emanation, only capable of

"The second, or Sanguine Temperament, is indicated by well defined forms, moderate plumpness of person, tolerable firmness of flesh, light hair inclining to chestnut, blue eyes and fair complexion, with ruddiness of countenance. It is marked by great activity of the blood-vessels, fondness for exercise, and an animated countenance. The brain partakes of the general state, and is active.

"The Bilious Temperament is recognised by fine thin hair, thin skin, moderate fullness, and much firmness of flesh, with harshly expressed outline of person. The functions partake of great energy of action, which extends to the brain; and the countenance, in consequence, shows strong, marked, and decided features.

"The Nervous Temperament is recognised by fine thin hair, thin skin, small thin muscles, quickness in muscular motion, paleness of countenance, and often delicate health. The whole nervous system, including the brain, is predominantly active; and the mental manifestations are proportionably vivacious."

The predominance of the glandular and assimilating organs, producing repletion of the cellular tissue, a membrane pervading the whole body, consisting of an infinite number of thready lines, filled in the interspaces with an aqueous vapour or fluid, formed of the thinner parts of the blood, is said generally to be the cause of the lymphatic temperament.

When the developement of the lungs, heart, and blood-vessels, form the leading

exciting the analogous organs in others, by the operator being in earnest himself; the larger his organs, the more intense being the shedding forth of the hidden principle. It may be thus that sympathy acts; and that the greater the number of brains animated by the same feeling, the greater will be the effect of their mutual action on the minds of each other. A man of small brain, however fine his language, his thoughts, his logic, may convince the reason of a being of larger brain; but will never, depend upon it, carry him away and along with him in the tempest or whirlwind of passion, or the torrent of enthusiasm. A man of large brain, on the contrary, rules the passions of his more moderate-headed audience with absolute sway, *especially if there be plenty of light and sufficiency of heat*, physical conditions of mental susceptibility, which only show more powerfully the simple and material elements upon which the ideas and emotions depend. Electricity, magnetism, or whatever name that principle may assume, which pervades and animates all nature—which, in one shape, is seen in man and animals—in another, in plants—in a third, in the process of crystalization and stratification—and, in a fourth, in inorganic matter—is a wonder, which renders all things else credible and common. Its subtlety, which reaches from pole to pole, may penetrate one mind from another; its power of producing life, and growth, and structure, may surely be sufficient for the less singular phenomenon of passing from one brain to the sympathies of another; or for creating a more delicate sensibility and expanded capacity of perception in the individual who is under its absolute dominion. Savages can distinguish friends from foes by their scent; and the boy Mitchell, recognised persons at a considerable distance by the same means. Spallanzani vivified many thousand frogs' eggs with the two billionth part of a grain of the fecundising matter of a male frog. Prevost and Dumas vouch for the same fact. "How imponderable," says Millingen, "and impalpable must be the effluvium which enables the dog to track his master for miles, the particle of attar of roses which perfumes a whole chest of clothes, and the power of the aroma which is preserved in Egyptian mummies for thousands of years!" Young females married to very old men find their vital powers depressed, while their husbands become strong in the same ratio. So, Dr. Copeland cured a child of an inexplicable atrophy, by directing that it should no longer sleep with its grandmother. Caspar Hauser saw darkness as twilight, and broad day was an insupportable blaze. He got headach by the smell of a glass of wine at a distance, and nearly died of a rose in aromatic pain. The smell of a churchyard, imperceptible to any one else, threw him into a fever and perspiration. He could stand no food but bread and water. When the north pole of a small magnet was held towards him, he described a drawing sensation proceeding outwards from the *epigastrium*, and as if a current of air went from him. The south pole affected him less, and he said it blew upon him. Professors Daumer and Hermann made several experiments of the kind, calculated to deceive him; and even although the magnet was held at a considerable distance from him, his feelings always told him very correctly. These sensations caused perspiration and a consciousness of indisposition. He could detect metals placed under oil-cloths, paper, &c. by the sensation they occasioned. He described these as a drawing, accompanied with a chill, which ascended according to the metal, more or less up the arm, and were attended with other distinctive feelings, the veins of the hand exposed to the metal becoming visibly swollen. Who, after such phenomena, can say it is impossible that the subtle emanations of one brain may operate vigorously, although insensibly, upon another, or upon thousands—when electricity, a spirit finer than the air, produces such palpable and appreciable sensations, and emanations of metals of so peculiar a character, as to be easily distinguished by a sensitive and delicate nervous apparatus?

We only hint at these speculations in this place, but entreat our Phrenological brethren to pursue with us the expiscation of the same line of investigation.

corporeal feature, superinducing a fondness for exercise, and imparting great animation to the facial expression, the production of the sanguine temperament is assigned as the effect.

A prevailing muscular tissue, or fibrous system, constitutes the bilious temperament; while,

The superiority of the brain, and the nervous mass, over the other corporeal elements of structure, is supposed to cause the nervous temperament.

Dr. Thomas of Paris, with whom Dr. Andrew Combe appears to coincide, has propounded a more detailed theory, which his eminence as a physiologist, and his authority in the world of physical science on this subject of the temperaments, will form a sufficient warrant for introducing to the notice of the reader.

On looking at the animal system, he states, that we find three great groups of organs, each performing distinct functions, but contributing to one general end. The first, contained in the cranium, carries on all mental operations, produces sensation, and supplies nervous energy to the body. The second, in the cavity of the chest, including the lungs and heart, produces circulation and sanguification, processes having one common object. The third, contained in the abdomen, embracing the stomach, liver, spleen, bowels, &c. all combine to effect the conversion of blood into chyle, excretion, and separation.

When the lungs are relatively spacious, there results an abundant sanguification; and, assisted by the active circulation arising from a robust heart, great animal heat is the consequence. This is proved by the blood being more serous, the pulse softer, and the heat less in infants and women, whose thoracic organs are little developed relatively to those of the head and abdomen. Cold-blooded animals with small thorax, may, in this respect, also be contrasted with birds, in whom that system preponderates.

In the lowest animals, as worms and zoophytes, the abdomen constitutes the whole animal. In insects, a nervous centre and respiratory apparatus are added; but the abdomen still greatly predominates. In reptiles and fishes, the proportion becomes smaller; and in birds and the mammalia, the abdomen becomes relatively still more diminished. Herbivorous animals eat little, but often; and their abdominal organs are large and greatly developed. They form chyle in abundance, and hence are fat. Carnivori, again, forced to hunt for food, eat rarely and in large quantities, their thorax being more in requisition than their abdomen. Accordingly, they have capacious chests, and small bellies; hence their vigour and leanness. Abdominal men eat little and often; they digest continually, and sleep much; while the thoracic-nervous man eats with avidity, his digestion is imperfect, and he remains dry and thin, in spite of the aliment which he consumes.

These temperaments are subdivided into,

1. The MIXED TEMPERAMENT, of which the Apollo Belvidere is the model. Nothing is too strong or weak. "That brain cannot be the seat of too violent passions, although it may experience them all." The intellectual faculties, sufficiently developed, do not hurry him on to the vagueness of hypothesis or conjecture; his blood is neither too fibrinous nor too much animalised; his abdominal functions are performed with facility; and the physiognomy represents, in all its features, the perfect equality of the whole body. This temperament is common in France, and between the ages of 20 and 45.

2. The CRANIAL or ENCEPHALIC.—Head relatively large; open facial angle; moderately developed thorax and abdomen, and spare form; great energy of passion, sentiment, and intellect. Found in cruel tyrants, chiefs of sects, great authors—Cataline, Tiberius, Brutus, Aristotle, Cicero, Pascal, Pope, Tasso, Moliere, Voltaire, Rousseau, &c. all of whom were meagre and spare—remarkable for predominance of the encephalic over the thoracic and abdominal organs.

3. The THORACIC.—Small head, limited abdomen, voluminous chest. The Farnese Hercules is the beau ideal of the class. It fits a man for fatigue, and is well figured in boxers. Health robust, and diseases inflammatory.

4. The ABDOMINAL.—Protuberant abdomen; broad pelvis; much cellular tissue; chyle and fat in large quantity; slow movements; eating, drinking, and sleeping, in an invariable round.

5. The CRANIO-THORACIC.—The head and chest relatively much larger than the abdomen; muscles powerful and dense; moral and physical force great.

6. **THE CRANIO-ABDOMINAL.**—Head and abdomen large; chest small; muscles moderate in size, plentifully interspersed with cellular substance; whence arise the round and soft female form.

7. **THE THORACICO-ABDOMINAL.**—Small head; ample thorax and abdomen; large muscles, bones, and cellular membrane. Well fitted for patient endurance of fatigue; and found oftener in Asia and Africa, than in Europe or America.

"Supposing the health to be good," observes Dr. Andrew Combe, "if the head and brain be large, and the thorax and abdomen relatively small, we shall find not only predominance of cerebral power, but also, so far as our observation goes, cerebral activity; or, if the head and thorax are both large, with a small abdomen, we shall find mental power and muscular energy combined; but as part of the nervous energy will necessarily be expended in supporting the greater demand of the muscular system, the mental power will be less purely intellectual in its manifestations, and less capable of long continued efforts of thought, and consequently the individual will make a less permanent impression of intellectuality; and, in our conceptions of his character, the thoracic and locomotive manifestations will also be felt, as constituting no small portion of the man. A big thorax cannot brook confinement and sedentary occupations, and is consequently not favourable to long-continued mental efforts.

"A large brain again, with a large abdomen, and strong powers of nutrition, will constitute another modification of temperament, in which the vivacity and permanence of the mental functions will be subdued still more than by a large thorax; and although the cerebral energy will still be felt, it will appear much more in fits of exertion than as a durable state; and, in our conceptions of the man, the abdomen will constitute a large proportion of the figure, and the animal appetites will be felt to consume at least as much of the nervous energy as the purely human or intellectual powers. Of this effect, the late Sir John Leslie was a remarkable example."

In dissenting from the opinions which we have here recorded, we shall offer no apology for entering considerably into detail upon a subject, the expiscation of which is of so much importance to the practical study of Phrenology.

The round soft form of body, stated as indicative of the lymphatic constitution, has more frequently than otherwise characterised the most active-minded, brilliant, and laborious men. Gibbon, who has written more, studied more, thought more, acutely and deeply, and written more eloquently and ably than any of his contemporaries, was enormously fat, fair, and clear in the skin, and so soft and overgrown; that a French lady, at whose feet he threw himself, had, it is said, to ring the bell for the servants to raise him up. Dr. Johnson was called the fat philosopher, whose mind was never at rest, and never knew fatigue. Napoleon was remarked for the feminine softness of his person, and a corpulency which, at St. Helena, became excessive. Montaigne also was very fat; and Fox, one of the most laborious and active spirits of the age, was like a tun. A merchant in Dundee was pointed out to us, nineteen stone weight, the most active man of business in the town; and we know a case nearly similar in Edinburgh.

Of what are flesh and fat made? The answer is extremely obvious to any ordinary mind. They are composed of the blood; and the greater the quantity of the blood, the greater the tendency to change food into flesh. What temperament is characterised by the superabundance of blood? Clearly the sanguine. What temperament is least so? The lymphatic. *Ergo*, the sanguine temperament is most disposed to obesity, and the lymphatic least. Dr. Thomas notices the *herbivori* as examples of this latter temperament; but never was there a more self-evident contradiction. One cow has as much blood in it as a dozen lions.* We will stake the heat of that of the one against that of the other; we will engage that the chest of a bull shall be as deep in proportion to his size as that of the *carnivori*; and were we on the turf, would peril something on his clearing a five-barred gate. The truth is, the strength and muscular power of the bull is three times that of the lion; and the statements of Dr. Thomas only show how far theory will tempt writers to overlook the most palpable facts. The cow is an example of the sanguine temperament,

* Did Dr. Thomas ever see the wild cattle of Scotland, which are never for an instant at rest, and are dangerously fierce; or the wild boar, or the wild horse, or the red deer—all herbivori? He would hardly class these in the lymphatic temperament, were there no barriers betwixt him and them.

in which there is abundance of blood, and little muscle. Thus there is a rapid conversion of food into flesh, and no muscular temperament to check obesity, or to make the substance hard, tough, or firm. The bull is an example of the sanguine temperament, modified by the muscular. There is the same tendency to over-production of blood, checked by averting it from the current of fat or soft flesh, into muscle. An over-production of blood superinduces, of course, activity of brain; and the sanguine man is naturally active and lively in mind; but if he be deficient in muscle, that will not extend itself to activity of body. When unsupported by the bilious temperament, the brain gets overloaded, produces a tendency to inaction and to sleep, as is illustrated in apoplectic subjects, or in persons of what is called a "full habit of body," or "lusty"—terms which imply superabundance of sanguiferous circulation. The persons most prone to sleep, are not those having least blood; but, on the contrary, those having so much as to produce a tendency of blood to the head.*

The bilious or muscular temperament, is that which is characterised by little flesh and much fibre. There is here no reason whatever for the predication of either much energy or great activity. All that could be expected from it, and all that it indeed performs, is to give durability to mind and body, and to neutralise a tendency to inaction. But unless united with the nervous or sanguine temperaments, it is simply enduring, patient, and tough, acting as the servant of the others, and sustaining the activity which it is their province to produce.

Abstract all idea of the sanguine or bilious temperaments from the nervous, and what remains? A poor chest; deficient lungs; a defective digesting apparatus; no endurance of fatigue, mental or bodily. The brain predominates, and its fibres are fine and delicate. There is then extreme sensibility, much susceptibility of impression, and an entire dependence for action upon external stimulants. There is, we should suspect, not much spontaneous and internal activity of the faculties, or great force in the emotions. But the nervous brain responds to the touch of external circumstances, with a sensitive and delicate rapidity which surpasses all the rest. The fibres are extremely fine, and the motion of the chords susceptible of the easiest and most rapid vibration; so, that while the sanguine man is most liable to internal emotions, the nervous is most easily excited to the appreciation and perception of all that is without him. The one has most passion, the other the keenest sensibility; the one is most excitable, the other the most sensitive; the one will feel most deeply, the other perceive most quickly. It is a law of the circulation, that the blood will be in largest quantity wherever there is most action. The brain of the nervous man being the largest elementary principle of his system, it will attract all the available sanguiferous force that it can muster; and hence the rest of the body will be impoverished to feed the cormorant encephalon.

There appears to be no such temperament as the lymphatic; and, indeed, the very description of its attributes might have suggested to writers on the subject, that they were depicting the *absence* of some qualities—not the presence of any. The lymphatic temperament, then, is simply a deficiency of blood, of muscle, and of delicacy of fibre. But it is necessary to attend to the fact, that, besides fineness of brain, there is a particular which creates a great difference upon its available qualities. The encephalon is sometimes found with a very small number of *sulci*; and these, besides, extremely shallow—a comparatively small quantity of brain in the cranium, and little tendency therefore to action, or to the attraction of the blood to that quarter. The distribution of nerves through the system, is in the same limited ratio, and they are unconvolved; so that, through the whole system, there is a feeble susceptibility of sensation. The optic nerve of the ox is of this kind, which strongly contrasts, in its absence of folds, with that of the eagle, which may be said to belong to the nervous temperament. Persons having that negation of temperament, called the lymphatic, possess within the mass of the encephalon, a smaller quantity of true and genuine brain than those of the nervous constitution. It is watery, serous, and coarse in the fibre. Wherever there is activity of mind and mental vigour, there is the nervous or sanguine bilious temperament; and, with sagacity

* The phrase, "*Laugh and grow fat*," is not to be overlooked here. Persons of the sanguine temperament are the most humorous and witty; and these are qualities always associated with obesity—Falstaff, Gibbon, Liston, &c.

and intellect, there always coexists an increased number and depth of the convolutions of the cineritious matter of the brain. As things which are equal to the same thing, are equal to one another; it is therefore evident, that the higher the temperament, the greater the number of convolutions, and therefore the quantity of cerebral matter contained within any given cranium. "In some of the inferior animals," observes Sir Charles Bell, "there are no convolutions; as we ascend the scale of beings, they generally seem to increase; and in man, above all other animals, are the convolutions numerous, and the *sulci* or furrows deep; and consequently the cineritious mass great, and its extension of surface far beyond that of all other creatures." The weight of the brain, the best index of its actual size, independently of mere soft pulp without fibre, is, says Mr. Combe, very various in different individuals. According to Meckel, it weighs in the new-born infant about ten ounces. Its consistence is then soft and pulpy, and no trace of fibres is to be seen; but gradually the fibrous appearance becomes more and more obvious as the individual approaches manhood. The weight of the adult brain is six times that of the infant; and that of Cuvier more than seven times. The greatest physicians in France declared, that they had never seen convolutions so numerous and compact, or such deep anfractuosities. Cuvier was a man of gigantic intellect, and elevated moral sentiments, but divested of passion, and free from the solicitations of mere animal impulses. His propensities were therefore little exercised; while his reflecting region may be said to have been ever on the rack. Accordingly, the cerebellum and posterior portion of the brain proper, devoted to the propensities, exhibited no unusual number or depth of convolutions; while the anterior and middle portions were numerous and deep. Scœmmering observes, that it is not until the seventh month that convolutions are at all observable in the human brain. From that time they gradually increase, in exact proportion to the degree of intelligence manifested, up to the period of mature manhood. Desmoulins and Magendie corroborate the observation of Bell, that in the lower animals there is an invariable relation betwixt the number and depth of these convolutions, and the amount of mind manifested. Tiedemann has traced the progressive diminution and final disappearance of the folds of the brain, from the apes down to the *rodentia*. Desmoulins states, that in some dogs, particularly those which, from their superior sagacity, are employed in hunting, the convolutions are scarcely less numerous and deep than in the higher tribe of apes; while in the less intelligent species, and in wolves, they exist in a much inferior degree. Dogs and cats present no greater differences in point of sagacity and docility, than in the remarkable depth and shallowness of their respective convolutions. In most idiots the number and depth of these are smaller than in sound persons. They are more or less effaced in chronic insanity; in fatuous imbecility the same result occurs; while, where the *mania* is acute, they are of at least the usual thickness, and highly injected with blood. These facts prove distinctly that temperaments are indicative of different degrees and quantities of nervous surface and cineritious matter in the same peripheral expansion, and therefore argue a difference in size of brain; thereby carrying out the principle, that size is the only real measure of power.

When it is said that size is, *ceteris paribus*, a measure of power, the introduction of the postulate "all other things being equal," must imply that something else may have the same effect as size. To contend that size produces power, and that temperament produces power, meaning thereby exactly the same thing, is to recognise a principle whereby the most opposite causes may be supposed competent to produce entirely the same effects; that brain is identical in its function, for example, with blood; or that the glands, lungs, and heart, are the same as the encephalon. It is impossible, either in physics or metaphysics, that exactly the same effects can proceed from totally dissimilar causes. A predominance of the abdominal viscera cannot be the same thing as a small quantity of brains; nor can the great developement of the thoracic apparatus be identical with the great developement of the head. Whatever definition we may give of power, it is clear that the energy produced by one of these causes must be of a different description from that which is produced by the other. This distinction, it appears to us, is that which arises out of the comparison of *action* with *susceptibility*, or, perhaps, rather *capability of action*. It is quite certain, that the brain being a material instrument, must be bounded by physical laws; and that if ideas, thoughts, feelings, and emotions, are formed by tangible

impressions made upon this physical substance, there must be a material and palpable limit to these impressions, according to the capacities of each brain to receive and accommodate them. At Goldsmith's Schoolmaster,

"Still the wonder grew,
How one small head could carry all he knew."

The popular language of mankind pre-supposes this hypothesis; upon the manifestation of any great exertion of memory, the individual is at once asked "how he could carry all that in his head?" The very fact that there is a limit to this memory, even in any single direction, is almost demonstrative of this truth, that its extent depends on the number of impressions which the size of the brain enables it to receive and contain. Malebranche entertains this conjecture, and Bonnet endeavoured to estimate the number of ideas each fibre was capable of holding during a long life. If a man can, for example, repeat a newspaper from beginning to end, by once reading—and there have been some such—how does it happen that there is a limit to the number of impressions which he is capable of sustaining at one time, and that when new ones are made, the former disappear, or are wiped off, like the characters from a slate? The theory of cerebral vibrations (in which Hartley has endeavoured to realise the conjectures of Malebranche), as the *media* of intellectual operations, perhaps ventures too far in the explanations of the mode in which the vibratunicles perform the functions of thought; but the general principle appears to be strictly Phrenological. The effect of size of brain seems to be to capacitate it to receive and retain a greater number of thoughts and impressions than a small brain, and thus to produce more profundity and greater grasp of intellect, by placing before the consciousness an enlarged number of ideas, wherefrom to form a solid and accurate judgment. In this truly consists power of mind—the capacity and susceptibility of greater variety and extent of thought. Hence is the difference betwixt a clever and an able man—a man of sense and judgment, in contradistinction to a man of talent. Hence is it, that many an expert speaker at the bar, is far behind an advocate of inferior practice, or a judge of no brightness, in the soundness of his opinions; and that not a few are to be found who blazon their fame in the public eye, while all the time the business which they advocate, is organised and performed by individuals of larger brain behind the scenes,—men who are not so rapid in their conclusions or quick in their views, simply because they are not so limited in their materials of judgment and their range of ideas—because their resolution is formed upon the foundation of a far more extensive classification of phenomena, and upon premises resting on the broader basis which their larger brain furnishes for their selection.* These men, at the same time, may not be ready in explaining to others the numerous grounds which actuated them in coming to a certain conclusion, and hence the individual of a more limited encephalon, may seem far the abler of the two, simply because he is at no loss to present his audience with the few ideas he possesses. It may indeed be contended, that the inference from this is, that the larger the head the more copious the memory and thoughts—in the face of the fact, that men with brains of limited size, are often remarkable for the variety of their ideas and the extent of their memory. It is here that Temperament is to be introduced into the consideration of the question, and that the theory of vibrations may be enlisted in the phalanx of illustrations. The largest brain is *capable* of receiving the greatest number of impressions, of retaining the most copious variety of thoughts, and will, upon the whole, in whatever order, or with whatever rapidity or

* The man of small brain sees clearly, as far as his vision goes; but the man of large brain extends his line of thought a great deal farther. The former is best adapted for the present—the latter for the future. The first will be found to rest in a new principle, which is suggested to him, and to set about reducing it to effect with great ability. Inform the latter of an original theory or new facts, and a light seems to burst upon him that shoots through the dark of to-day, and penetrates into the abyss of coming ages. Hence it will be found, that individuals of a small encephalon, rest in a principle as it is propounded—those of a large brain, carry it out to the very verge of its ramifications. The former, are the *juste milieu* party—the latter, the section of the movement. The first, talk of expediency—the latter, of nothing but truth and principle. The first, do not move an inch, but busy themselves with perfecting details of measures they have taken up; the last, see in every thing only a stepping-stone of what is to come—their eye steadily fixed on a far pinnacle of ultimate destination, to which the other has not enough of brain, and therefore of trains of thought elongated and connected, to carry his vision, as to the haven of perfectibility.

slowness, permanency or evanescence, possess the largest stock of ideas at any one time;* but capacity is not exertion, and power is not the same thing as the wielding of it. Brain may exist without action. In sleep it is as *capable* of thought as in its most active state, but yet it is as comatose, and as entirely without impressions, as the arm or the leg. It does not, and cannot think. It possesses the machinery of mind, but without the steam that moves the engine, or the water that turns the mill-wheel. So long as the blood has left it comparatively without motive power, it thinks none; when the great mass of the blood has retreated to the heart, the abdomen, and the lower extremities, it manifests no more thought than the nose or the eyes. It requires Temperament, therefore, to place it in the active state of thought; and the office of Temperament is to produce modifications of activity. In the cases mentioned by Bell, Cooper, and others, where the patients' skulls were laid open, and the brain exposed, it will be recollected that whenever thought, and passion, and emotion, were active, the blood increased, the circulation became more rapid, and, in consequence, the brain swelled so much as to protrude beyond the cranium—that when intellectual activity ceased, the blood gradually subsided—and that when the action of the mind was entirely stopped by sleep, the brain fell considerably within the skull, the circulation greatly diminishing both in quantity and rapidity. This demonstrates, in the clearest possible light, that the effect of Temperament is to produce action in the brain, and by that means to render it capable of the reception of ideas and impressions. The brain cannot think unless it be in action, and it cannot act unless the blood set it in motion. But the blood is not the thinking machine, any more than the steam is the mill or engine. Capability of action and of intellectual exertion, then, is the function of the brain; the production of that action is the province of the blood; and their combined results are the reception of impressions on the brain. Let a man have ever so large a brain, therefore, he may still possess far fewer available mental impressions, than with a smaller encephalon, placed by rapid circulation in a more favourable condition for the reception of ideas or objects. A brain that is feebly supplied with blood, may be in the midst of a thousand objects which it does not observe, and which, therefore, make no impression upon it. A much smaller brain, on the contrary, richly endowed with blood, will perceive, up to the extent of its capacity, every object that is presented to it. But mark the difference:—A large brain, copiously supplied with blood, has house-room for an enormous quantity of impressions, and possessing both size and activity, the result is; that it both sees and stores all that is presented to it. A small brain, supplied with blood equally well in proportion to its size, perceives what is presented to it with equal alertness; but being much more limited in its number of vaults, and the capacity of its cellars, the stock of impressions and ideas, for which it has stowage, is much less. Hence, the man with an active but *small* brain, has all the ideas which he stores up, present to his consciousness simultaneously, and is thus what is called clever and intelligent, because he produces all the goods in his shop easily and at once. Hence, also, the man with a *large* brain, and active Temperament, is able, powerful, and profound, because his mind presents to his consciousness a far wider field of thoughts and observations, from which to make a selection of those best adapted to the required purpose. The man of small brain and low Temperament, perceives little, and that little is recalled in such slow degrees, that it is never available for any purpose. The man of large brain and defective Temperament, may be "slow but sure," being actually possessed of an extensive series of ideas, and arriving at last at a sound conclusion, but not until after a tedious interval of cogitation. It is upon this principle, that the finest Temperament in the world will not produce a sufficient number of co-existing impressions to constitute reason, unless there be enough of brain to be the recipient of these contemporaneous thoughts; and thus it is an axiom recognised by all physicians, that be the brain ever so healthy, sound, and active, if it measure no more in circumference than fifteen inches, the individual will be hopelessly an idiot. If an imbecile's mind be watched, who is a little above the lowest stage, it will be observed to receive a few impressions, which are dismissed, and scored out, as it were, after a little space, never again

* As, witness Scott, the length of whose cerebral fibres is as remarkable as the great size of his brain—Cuvier, Napoleon, Mirabeau; Johnson, Pericles—Cyrus, who could name every man in his army—Mithridates, who could speak the language of the twenty-one nations of which he was king—Scaliger, Sir James Macintosh, &c.

recurred to, but making room for a few more, which, from their paucity, render coherence impossible. No trains of thought are followed for any available period. They are like processions of troops, or a coronation march, upon too small a stage, where the first squadron of the pageant has to move off the scene, in order to make room for the advent of the second, and thus no entire or consistent view of the whole spectacle can be presented to the consciousness of the spectator of his own mind, from which he may draw an accurate deduction of its nature, or conception of its aim and object: nay, as the appearance of only two or three of the figures of a pageant, dissociated from their connection with the rest, would only appear fantastical and incongruous to the man who was not aware of the design of the whole; so is it with an idiot's mind, which only appears insano, because its thoughts are presented to itself, and to others, in a shape that is unconnected and incoherent. So it is with monsters, which are now discovered not to be unnatural, but only to be a stopping short of a certain point of gestation, or are produced by the eccentric combination of two beings into one body. It is from this cause that fatuity, when proceeding from too small a brain, is principally characterised by rapid, sudden, and inconsistent chains of ideas, so that the first members of a syllogism, or a proposition, pass from the mind before it has had time so to combine them with the last, as to produce a doctrine or an argument.* By this method of solution, it is probable that the difference betwixt a retentive and a ready memory, may be explained:—A man of small brain, and active Temperament, must dismiss one set of impressions to make room for their successors, and will thus possess a quick but probably not a retentive memory—easily impressed and readily available. The man of large brain does not need to dismiss one guest from his penthouse, in order to make room for another, having beds for them all, and therefore more impressions can coexist in his mind at one time. The depth of the impression originally made, may also, of course, affect the strength of retention very sensibly; so that the objects observed in careless listlessness, may pass easily and rapidly away—leaving others of longer standing, but more impressively sealed on the encephalon, to a longer term of life, in the consciousness of the individual.† Copious memory may proceed from the double circumstance of a large brain and powerful Eventuality, that suggesting principle, which operates, by association, to call up all circumstances which in the mind were originally connected. Accuracy of memory is more to be expected in the man of large perceptive and inferior reflective, or suggesting organs. In his mind facts are bare, isolated, and dissociated. They are remembered nakedly in themselves—not in their relations. There is less liability to the confusion of memory, which must, of course, proceed from the recollection of the bare subjects being dependent upon associations which are more likely to be inaccurately recalled. Thus, one man will be found to narrate the bare skeleton of an occurrence with precision; another will record a thousand circumstances and little traits which the former had forgotten, but will so jumble dates, the order of events, and the relations of persons, to the different acts of the drama, that he will produce a most inaccurate representation of the performance.

An idea may now be formed of the simplest part of the process whereby action is produced—the circulation of the blood through the brain. But it is quite obvious that there is another element concerned in the superinduction of this action, and that is, the brain itself. Some rosin is no doubt required on the bow; but a sensitive and delicate susceptibility of vibration in the strings, will produce sound with a much less amount of mutual friction, than if coarse and unpliant catgut were used. So is it with the encephalon. The blood is the bow—the brain the violin and strings. The coarser the instrument, and the more unpliant the chords, of course so much the greater is the difficulty of producing action, and by action, thought. That each fibre of the brain is the seat of different classes of ideas, strung upon them, mayhap like globules of the blood in the veins, receives countenance from many cases of monomania. Phrenologists have long solved the question of madness upon

* The description of Davy Gellatly in *Waverley*, will remind the reader of this defect of mind, and its mode of operation. The accuracy of Scott's psychological eye, is one of the peculiar features of his genius.

† All persons who learn quickly, forget easily. An actor, mentioned by Dr. Abercrombie, acquired his parts with great rapidity, but as soon forgot them. When he acquired more slowly, he retained his recollection of the part longer.

one subject, by the general answer that one organ is diseased.* But this is absurd; because, if the organ were generally diseased, the individual would be mad upon all subjects which excited it. This, however, is certainly not the fact. Malebranche was not deceived by any thing but a shoulder of mutton at his nose; and the Parisian teacher of English had no dread of any one but a policeman. So an individual was only insane at the sight of red flesh; and another talked rationally to any one who would assume that he was the Holy Ghost. The phrase that a man has taken a notion into his head which nothing can drive out of it—that he has crotchets, and so forth, is a recognition of the same principle. To the like effect is the fact of mental training in a particular order, whereby the practice of receiving ideas in a certain series produces a facility of presenting them in the same order to the consciousness. So, the losing of the train of ideas, is a common expression to signify the destruction of one of the links in a chain of thought, where, by the rest not being presented at the same time with those before the broken link, the succession is lost. Thus, the man who hears a logical discourse remembers it, if he do not lose what is called the connection; but if that be lost, he has no materials for making up the theory propounded. How common is it, to observe in children who can repeat long portions of poetry, that, if they be desired to commence at the middle, they cannot go on—and that the multiplication-table can only be said by “beginning at the beginning.” Persons who show castles, chapels, panoramas, &c. if interrupted in the midst of their description, forget all, and are compelled to commence of new. The same principle appears to regulate association. When we remember one circumstance, we find that all the facts with which it was originally presented to the mind start up in the same connected series. A single chord of a tune will recall the whole air; a man’s stick will place before our eyes the man himself, because that article was stamped on our mind at the same time with himself; and all the coins struck from the same die issue from the mint at the same period. Dugald Stewart observes, “the influence of perceptible objects in awakening associated thoughts and associated ideas, seems to arise in a great measure from their permanent operation as exciting or suggesting causes. When a train of thought takes its rise from any idea or conception, the first idea soon *disappears*, and a series of others succeeds, which are gradually less and less related to that with which the train commenced; but in the case of perception, the exciting cause remains steadily before us, and all the thoughts and feelings which have any relation to it crowd into the mind in rapid succession, strengthening each other’s effects, and all conspiring in the same general impression.” It is in this way also, that the phenomenon of the mind taking a set, as it is called, may be accounted for. Every one must have known individuals who had originally conceived a man to have a certain name, and who, although told a hundred times that he owned another patronymic, never saw or heard him alluded to, but the name with which his person was originally associated in their recollection, invariably occurred. In children beginning their letters, the correction of an error a thousand times does not change it. There a sound was associated at first with a certain letter or word, and there it continues to coexist with it.

The Sanguine Temperament, then, produces mental action by superabundance of blood; the Nervous, by the fine and sensitive delicacy of the fibres of the brain. Deficient to a great extent in the supply of blood, the nervous man has the mere susceptibility of action; deficient in fineness of fibre, the sanguine man has the ma-

* And Drs. Gall and Spurzheim, by the very sapient expedient of calling every thing for which they could not account consistently with their peculiar views, “a *modification* of the organ.” Thus, the confinement of the taste of the *herbivori* to vegetables, is a *modification* of the organ of Alimentiveness; and the tendencies of one animal to burrow, and of another to live in altitudes, are *modifications* of Inhabiteness. Our belief is, that the organs are in each the same originally, and that their differences of habit arise from situation, climate, and education. The organs change in their direction by education—as, witness the sow eating flesh—the sheep living upon ale and whisky—the pointer, whose instinct originally produced only a short pause in rushing on the game, drilled to convert this into a full stop; “and what is most curious, this quality is in a great degree inherited by his puppy, who may be seen earnestly standing at swallows and pigeons in the farm-yard.” English sheep, on being transferred to Scotland, keep together; while Scotch sheep spread themselves on their more scanty pasture. In the third generation, the English sheep do the same. The turnip was not relished by the Scotch sheep until the third generation. The amble, the pace to which the domestic horse in Spanish America is *trained*, becomes in the course of generations hereditary, and is assumed by the young ones without teaching.

terials for producing action, but an untractable machine to set in motion. Circumscribed in quantity of blood, and fineness of fibre, the individual presents the negation of the other Temperaments in the Lymphatic, which appears to be the result of defective force in the heart to propel the blood through the system, or to carry on the process of contraction and expansion, and thus to produce lymph, serum, and when the circulation is much impeded, water. In diseases of the heart, which retard the circulation, dropsy is an unfailing feature; which is removed by accelerating the circulation by rubbing, and by medicines which have a stimulating effect.

Out of the blood is formed the blandest fluid, as milk, and the firmest solid, as the compact bone. The heart, capable of untiring action so long as the blood is in contact with its internal surface, becomes immovable soon after the supply of this fluid is withdrawn; and in less than one minute after, it ceases to flow in due quantity, and of proper quality, through the vessels of the brain, the eye is no longer capable of seeing, the ear of hearing, nor the brain of carrying on any intellectual operation.

The process of coagulation affords three distinct substances—the chief constituents of the blood, namely, serum, fibrin, and red particles.

The serum, the fluid portion of the blood, of a light straw colour, tinged with green, is composed principally of water, holding in solution animal and saline matter.

The second constituent of the blood, the fibrin, is the most essential portion of it, being invariably present whatever other constituents be absent. While circulating in the living vessel, fibrin is fluid and transparent; by the process of coagulation it is converted into a solid and opaque substance of a yellowish colour, consisting of stringy fibres which are exceedingly elastic, and in their aspect and chemical properties bear a close resemblance to pure muscular fibre deprived of its enveloping membrane, and of its colouring matter, and they form the basis of muscle.

The third element of the blood, the matter upon which its red colour depends, though entirely absent in certain classes of animals, and in all animals, in some parts of their body, seems to be essential, at least, to the organic organs, whenever they perform their functions in a high degree of perfection. Thus, in the lowest class of vertebrated animals, the fish, while the principal part of its body receives only a colourless fluid, its organic organs, as the heart, the gills, the liver, are provided with red blood.

The relative proportion of every constituent of the blood is capable of varying, and, of course, in the degree in which the healthy portion is deranged, the quality of the mass must undergo a corresponding deterioration. The watery portion is sometimes so deficient, that the mass is obviously thickened; while at other times, the fluid preponderates so much over the solid constituents, that the blood is thin and watery. The albumen, the quality of which varies considerably even in health, is, in disease, sometimes twice as great, and at other times is less than half its natural proportion. In some cases the fibrin preponderates so much, that the coagulum formed by the blood is exceedingly coherent, firm, and dense; in other cases, the quantity of fibrin is so small, that the coagulation is imperfect, forming only a soft, loose, and tender coagulum, and in extreme cases the blood remains wholly fluid. When the vital energy of the system is great, the red particles abound; when it is depressed, they are deficient. In the former state, they are of a bright red colour; in the latter, dusky, purple, or even black. They thus sometimes escape from the current of the circulation, as if dissolved in the serum, through the minute vessels intended only for the exhalation of the watery part of the blood.

We thus see, that every part of the human body consists of the deposits of certain parts of the blood, from the softest milk to the hardest bone; and that the proportions of its elementary parts vary in different individuals, and in different parts of the same body. In some, the watery part; in others, the fibrous; and in many, the red portion predominates. What is the cause of this? Three persons may eat exactly the same quantity and quality of food, and yet the blood converted from it, may, in the one be more fluid, in the second be more fibrous, and in the third more impregnated with red particles. Parts of the blood which ought to be removed, may be retained; or parts which ought to be retained, may be removed; and hence, the actual quantity in the system may be superabundant or insufficient. Now, it is a doctrine of Phrenology, that the Lymphatic temperament is indicated by a pre-dominance in the system of the aqueous portion of the blood; and the Sanguine, of

the red or most vital particles. It is more than probable, nay, it seems certain, that the Bilious temperament is the result of the predominance of fibrin in the blood, the deposit of which we know to be the main skeleton of the muscular system. But the question recurs, How is the predominance of the various elementary components of the blood superinduced? An answer seems to be afforded by Richerand:—"Nutrition," says he, "is but a peculiar mode of secretion, which is different in every organ. The nerves, of which there are always a certain number in the structure of the secretory organs, give to each of them a peculiar sensibility, by means of which they discover in the blood which the vessels bring to them, the materials of the fluid which they are destined to secrete, and these they appropriate to themselves by a real selection." Mr. Carmichael observes, in speaking of the nourishment of the brain, "that there should be nerves to select from the circulating fluid the appropriate materials, the scattered ingredients of the soil: whether the brain itself performs this office, or whether it contains a peculiar machinery for the purpose, is a question that must be left for future physiologists to decide."

Mr. Carmichael has here suggested a theory which rests upon a great deal more than mere conjecture. Richerand clearly states, that the *nerves* of the secreting glands are the organs which select the blood, and whose inaction upon the presentation of parts of it with which they do not sympathise, causes their rejection from assimilation with the system. All nerves have their source in the brain, so that the selecting instruments are distinctly traced to the encephalon. The question which remains is, does the brain operate or act, in the selection of the substances offered to the nerves by the blood-vessels, or does it not interfere with anything but the process of thinking?

The brain seems not only to be the organ of intellectual manifestations, but is assuredly, and *ex concessis* of physiologists, the source, seat, and centre of all sensation.* It appears to regulate, and to be affected by the circulation of the blood; to be an important element in the process of respiration, either actively or by reaction; to control secretion, absorption, and nourishment; and to be essentially concerned in digestion and the secretion of bile; thus involving the functions of the heart, the lungs, the liver, the stomach, the glands, the skin, the muscles. Whether it be by a different portion of the brain than that which forms the organs of the mind, that this connection is maintained, Phrenologists have not been careful enough to inquire; but they concur in the admission, that those parts of it which perform intellectual functions, have a very intimate relation with all the different processes of the merely physical system; a doctrine of great, nay, of infinite importance in the consideration of the causes which produce differences of disposition—involuntary thought or emotion—degeneracy of soul—improvement of the intellect of the species—habitual feelings, whether of a degrading or ennobling character—the overmastering of the abuses of propensity—the government of the temper—cheerfulness of disposition—clearness, quickness, and continuity of thought, and delicacy of perception. When the modesty of the virgin is insulted, (a disagreeable affection of Secretiveness, Amativeness, Self-esteem, and Love of Approbation,) see how the eloquent blood mantles

* This demonstrates conclusively the necessity of combining the study of psychology with that of physiology, and the importance of a union of the researches of the followers of moral and natural science. But the British Association—which has sanctioned with its approval the declaration, that that man is an enemy to its success, who attempts to introduce a section into its discussions devoted to metaphysical inquiry, and which has not a single word upon the subject of Education even in its whole proceedings—know how to make policy, convenience, and respectability overlook all the necessities of truth, knowledge, and philanthropy. What society of profound and able men but a British one, would have hunted after lords and earls to preside over the deliberations of science, making itself the laughing-stock of the rest of Europe for sycophantic and servile obsequiousness? But every thing, and every man in this country is classified into ranks—a title being a far greater passport to distinction of *all kinds* than merit or genius. Even religion is not exempted from this universal passion for external proprieties. We can recollect of the Bible Society appointing the most worthless profligate and open debauchee in the kingdom to be their president, an honour which he declined upon the express ground of his known sensuality, accompanied with a very proper castigation of their shameful hypocrisy. Art, literature, every thing, must have the Queen for patron, and a duke, at least, for the president of its assemblies. The turf, even the ring, calls out for rank, as if that could make a fleetier horse, or a more game or muscular bruiser. Nay, blackguardism itself has its orders of precedence—and Tom, Dick, and Harry make way for the Marquis, in breaking windows, knocking down the watch, or insulting the sober, and striking defenceless women.

in the *cheek*! When fear (Cautiousness) seizes the *mind*, the craven heart of the coward sinks within him, and cold drops of sweat stand upon his *brow*. When the brave are in suspense as they steal upon their enemies, (Secretiveness, Hope, and Cautiousness,) and in a courageous dread expect the opening roar of the artillery of the invaded—

“As they drift along their path,
There is *silence deep as death*;
And the boldest holds his *breath*,
For a time!”

When all that's bright has faded, “the fairest still the fleetest,” and despair (small Hope and Combativeuess, and large Cautiousness) unbidden, but unrejected comes, with his scowl and his scorn—look at the wan cheek, the lustreless eye, the blackening countenance; or even submissive and resigned sorrow, with its grey hairs, its glistening orbits, its pale brow, its haggard looks; or fierce wrath (Destructiveness)

“Where each strain'd ball of sight
Seems starting from his head.”

The common language of mankind is full of undesigned recognitions of this doctrine. The passion of joy is said to make the *heart bound*. Provocation rouses a man's *bile*; and Hamlet complains that he is *pigeon-livered*, because his spirit is not angry and bitter enough. An angry man is called hot-blooded; a cruel one, cold-blooded; a kindly one, sweet-blooded. Jealousy, Shakspeare styles green-eyed; envy, lean-faced. A few grains of opium, or a few glasses of wine, produce brilliancy in the dull, Dutch courage in the cowardly, hope in the despairing,* and religion in the unthinking—

“*Cassio*.—Well, Heaven's above all! There are souls that must be saved, and souls that must not be saved.”

A hard bout of drinking has been the source of many celebrated conversions; and much emaciation, or a diminished supply of blood, has been the source of the couplet,

“When the devil was sick, the devil a monk would be;
When the devil grew well, the devil a monk was he.”

The conversions of Sir Matthew Hale and Colonel Gardiner, took place when the latter was what Gascoigne would call *goat drunk*, and the former *maudlin drunk*. Bulwer, very properly complains of Government feeding criminals in the reverse ratio of their iniquity, showing clearly, that a diet of bread and water, which is given to the perpetrators of the smallest offences, has the direct effect of diminishing the activity of the propensities, and thus encouraging the moral powers; while he remarks that the more abandoned villains are fed highly, and their animal passions are thus stimulated tenfold, instead of being checked by a regimen of abstinence. Byron, from principle, dieted on potatoes—observing, that a week of beef-steaks would make him fit for being caged in a menagerie.

So intimate is this connection betwixt the brain and the body, and so uniformly do they act and react upon each other, that unless in the philosophy of health, this principle be constantly attended to, bodily and mental disease is the invariable result. The nerves all proceed from the brain, and are necessary to the discharge of every corporeal function. Over-tax them, and disease invariably follows. Thus, if after having dined heartily, we demand the whole resources of the nervous energy

* The effect of liquor on the mind, and on each separate propensity as it happens to be developed in the individual, is well illustrated by George Gascoigne. “The first is *ape-drunk*, and he leaps, and sings, and halloos, and danceth for the hearers (Hope excited); the second is *lion-drunk*, and he flings the pots about the house, calls the hostess w—, breaks the glass windows with his dagger, and is apt to quarrel with any man that speaks to him (Combativeuess and Destructiveness); the third is *swine-drunk*, heavy, lumpish, and sleepy, and cries for a little more drink, and a few more clothes; the fourth is *sheep-drunk*, wise in his own conceit, when he cannot bring forth a right word (Self-esteem); the fifth is *maudlin-drunk*, when a fellow will weep for kindness in the midst of his drink, and kiss you, saying, ‘By G—, I love thee! Go thy ways; thou dost not think so often of me as I do of you; I would I could not love thee so well as I do!’ and then he puts his finger in his eye and cries (Adhesiveness and Benevolence); the sixth is *martin-drunk*, when a man is drunk, and drinks himself sober ere he stir; the seventh is *goat-drunk*, when in his drunkenness he hath no mind but in lechery (Amativeness); the eighth is *fox-drunk*, when he is crafty-drunk, as many of the Dutchmen be, which will never bargain but when they are drunk (Secretiveness). All these species I have seen practised in one company at one sitting.”

for the operation of the muscles in walking, digestion is impeded, if not altogether stopped. Thus also, if we engage our minds, and consequently our brains, in any arduous mental exercise when we are eating, or have just eaten, the nervous energy required for the process of digestion, is expended in the occupation of thinking, and indigestion is the result. Thus also is it with all the secreting organs, those glands by which the different humours of the body are collected for the purposes of lubrication, decomposition, or assimilation. Each of these glands is supplied with nerves from the brain, whereby their action proceeds. Destroy the connection betwixt these and the brain, and the power of secreting is gone. Enfeeble them by expending the general mass of nervous energy in thinking, or any thing else, and you retard and enfeeble the powers of secretion. Cut the nerve which conveys to the brain a knowledge of the state of the stomach, or of any other organ, or a limb or other part of the body, and immediately all sensation of the part ceases. We have already said, that all the substances of which the human body is composed, are originally blood; that large blood-vessels run into every gland, where, by the peculiar nerves of each, the blood is converted to its peculiar secretion. The mind is the primary cause directly of exciting many of these. Thus, the bare sight of food, has such an influence on the mind, that it stimulates the brain, and through it the nerves, instantly to secrete the saliva or spittle which is necessary to the digestion of the nutriment. Hence, the common expression, that a fine dish makes the mouth water. Dr. Gairdner's patient who had cut his throat, was observed to show saliva at the aperture, whenever food was presented to him. This mental action also produces secretion of bile, and other digestive juices; and the presence of any object calculated to create great cerebral action, instantly, by that action, produces great energy of the nerves belonging to those parts of the system which make the appropriate secretions. The act of blushing or laughing, seems to arise from the action of Secretiveness, and some other organs, in stimulating the instruments of circulation and respiration. So the excitement of the organ of Cautiousness, appears to act upon the nerves which produce secretions of the skin, and exudes at the forehead cold and copious drops of perspiration. "The suffusion of shame," says Dr. Burrows, "will suppress the secretions, has occasioned insanity, and in some instances, has even produced death. Diffidence, which is another modification of modesty, has also induced mental derangement. The effects of anger and fear on the heart and circulation, are opposite; the one impels more blood to the brain, and stimulates the nervous power; the other depresses and enfeebles the action of the heart, diminishes the quantum of blood flowing to the brain, and deteriorates the nervous power. So likewise, in respect to muscular power, anger immensely augments, fear paralyses it. The secretions and excretions are singularly affected by fright. A mother was so agitated by fear, that upon afterwards suckling her infant, and its quitting the nipple, it exhibited *symptoms of great inquietude*, and died in its mother's arms.* Particular passions exercise distinct effects on the corporeal functions; the smell or even the expectation of food, excites the salivary glands; maternal feelings, the secretion of milk; and dislike, both in the human and brute creation, prevents the flow of it; grief excites the stomach and lachrymal ducts; anger, the liver; terror, the nerves, inducing palsy; extreme hope, the respiration. The mental affection known as nostalgia, or an intense desire to return to one's native country, is a disease purely arising from a moral source, but it produces a positive organic lesion; for Avenbruger says, that on dissecting the bodies of those who have died of it, the lungs are always found adhering firmly to the *pleura*."

The depth of the cerebral convolutions, or of the cineritious, or grey matter which forms the outer part of the brain, and which, during life, is of a deep flesh colour, containing a great quantity of blood, is, as has been already explained, intimately connected with, and is, indeed, the index of mental activity or energy. In animals of the lowest grade of intelligence, these convolutions are almost wanting, and they increase in number and depth as the scale of mind ascends—being deepest and largest in man. They are most profound and most numerous in the intellectual or

* Here the excited organ of Cautiousness in the mother, evidently impregnated the milk with the peculiar afflatus of that organ, and the fear being by that means conveyed to the child, its organ was also excited, and it "*exhibited symptoms of great inquietude*." What is there so strange in Animal Magnetism, after this? See, afterwards, the effects of the blowing up of the arsenal at Landau.

anterior region of the brain; not so numerous in the coronal surface, the site of the moral sentiments, and still less so in the locality of the propensities. "Comparative anatomy," says Cuvier, "exhibits another confirmation of the truth, that these convolutions are the seat of thought, in the uniform relation of the amount of volume of these lobes to the degree of intelligence of animals." In proportion to the extent of mental power and energy, is the attraction of blood to the brain, because that organ thus demands a greater supply of sanguiferous nutriment to support the over action. Accordingly, it is curious to remark the principle of the secretion of tears. Weeping is only produced after great mental excitement, and, consequently, after violent cerebral action. It is a secretion whose primary source, like that of all others, is the blood. The action of the blood is greatest in the brain, when that mass is in the highest state of excitement. It seems natural, and, indeed, warranted by fair process of induction, to suppose, that the relief given to the mind, when in a high state of action by tears, is a beautiful arrangement of nature, whereby the superabundance of blood supplied to the brain when so excited, and which, if allowed to remain, might produce inflammation, is drawn off by the lachrymal glands, and changed by the converting process into the state of tears. This is so far corroborated by the fact, that those nations, whose amount of mental power, and consequently cerebral action, is the smallest, are seldom or ever known to produce this secretion. The American Indians, for example, who are remarkably deficient in mental action,* almost never laugh, and never weep. Those persons in ordinary society, whose intellect is of the slowest and dullest kind, are also least prone to tears. In childhood, the mind is in by far its most active and excited state, and it is then, accordingly, that tears are most frequent. Those persons whose brain is most active and liable to excitement, are exactly those who weep most frequently and easily. Tears, too, are not the peculiar property of grief, but appear to follow the action of the predominating organs. Mirth, affection, benevolence, generosity, piety, rage, terror, sublimity, beauty, all produce tears. Hysteria, which generally arises from a very powerfully exciting mental cause, is truly a means provided by nature for relieving the brain, which would otherwise become absolutely deranged; and sudden shocks of misfortune, terror, anger, or joy, are overcome by laughing and weeping by turns. When the brain becomes much excited by liquor, the same result sometimes happens. Hence the vulgar phrase, "greetin' fou," or what Gascoigne would class under the category, "*maudlin-drunk*." The mental excitement produced by laudanum is oftentimes wrought off also by this natural vent; and at others, the nervous energy is abstracted to the diaphragm, and is exhausted in laughter and shouting, as among the Turks. Persons who constitutionally possess an imperfection in the lachrymal apparatus, and cannot weep, complain dreadfully of their incapacity to do so, and speak of the great pain they experience in the head.

"Good, my lords,
I am not prone to weeping, as our sex
Commonly are; the want of which vain dew
Perchance shall dry your pities; but I have
That honourable grief lodged here, which burns
Worse than tears drown."

Dr. Burrows observes, "Joy, however, is more likely to occasion sudden insanity, than grief; because the former cannot, like the latter, find relief in tears; and tears are the natural solution of cerebral congestion and excitation. If intense grief do not find this natural vent for increased cerebral excitement, mental derangement, especially with propensity to suicide, is a frequent consequence."† Dean Swift, whose

* "They have not the same acute and tender sensibilities with the other races of men. They seem callous to every passion but rage. Their impassible fortitude and endurance of suffering, which have been so much vaunted, are, after all, in my mind, the result of a greater degree of insensibility. No ordinary stimulus excites them to action. None of the common excitements, endearments, or motives, operate upon them at all." *Rev. Timothy Flint*.—The Temperament of these savages is purely Bilious; and that Temperament cannot "partake of great energy of action, which extends to the brain," as supposed by *Mr. Combe*.

† Dr. Burrows is wrong, as every one acquainted with human nature is aware, in supposing, that joy does not produce tears; but as tears are less accustomed to flow in the channel of joy, than grief—alas! because the latter is much more common in this world—he is right in supposing, that insanity is more frequently the effect of sudden joy, from this relief being less common.

words and works were so much the cause of laughter in others, was never known to smile himself, although the effect of his own wit must have been very great on his brain. The consequence of the want of the evacuation of the nervous energy through the lungs and diaphragm, and, probably, of a forced suppression of the chuckling and laughter which his satire was so calculated to excite in his own mind, was most likely the cause of his madness, or rather idiocy.

The reflex action of the nerves upon the brain, as clearly proves the former to be what Cullen denominates it, the common origin of the latter. When in a state of sleep, the fall of something produces an effect upon the ear. But this does nothing to the mind or to the consciousness. The impression made on the auditory nerve has to be communicated to the organs of the brain, and arouse the latter, which alarm, by some extraordinary process, produces a dream, in which the antecedent noise is introduced as the consequent incident, and we awaken with the sound as the last fact in the history of our adventure. A French gentleman could at pleasure dream of travelling in stage-coaches, by simply exposing his knees to the cold, that part of his body generally having become benumbed during his excursions in the mail. He could also dream of being in church, by leaning his head on something cold, from exposure to a draught of air to which he was accustomed at the cathedral of Notre Dame. A hungry man will dream of an ample repast, a thirsty one will drink oceans. "A patient with a blister on his head, has fancied himself scalped by Indians in all their fantastic torments." "A patient who had a bottle of hot water placed at his feet, dreamed that he was walking in great agony in the burning lava of Vesuvius."* These are general facts which establish the procession of the nerves of sensation and secretion, and, indeed, those of all the functions of the corporeal system from the brain.

But these nerves cannot proceed from the whole brain indiscriminately, for this very plain reason, that the encephalon consists of a congeries of at least thirty-seven mental organs, each possessing distinct, and many totally opposite functions; and if all the nerves proceed from the brain, they must proceed from one or other of these as separate organs; and must, as a necessary consequence, be affected by the peculiar functions of that organ; the latter being in turn clearly acted upon by the operation of external causes affecting the extremity of the nerve farthest from the brain. This is a proposition which appears to be very plain. If the nerves proceed from the brain, they must each ramify from a particular portion of it, and we know Phrenologically, that to each part of it is assigned a separate function. The brain is divided in its largest proportion into passions and emotions; and it is remarkable, that for each of these, there is a different expression of the countenance, so universal even among men, the most artificial of all animals, that each of the species in every quarter of the globe, can discriminate the physiognomical exponent in any other. This is not a conventional arrangement, or one which has been, or could be invented. It is the instantaneous and involuntary outward sign of the passion, which design, so far from making, cannot even control. Expression depends upon muscles, muscles move by nerves, and nerves proceed from the brain. When the expression of rage or grief or joy is involuntary, it is universally the same; and as there are individual organs which are confined to the production of such emotions, it seems pretty clear, that each organ has assigned to it the action of certain nerves and their relative muscles. Thus, also, of sound. The moans of agony are never mistaken for the cries of joy; nor the deafening hoarse brawling noise of rage, ever supposed to convey the accents of benevolence or devotion. If these passions have, then, an involuntary universal expression assigned to each, and that expression be the result of a certain action of particular muscles, unprompted and uncontrollable, is it not to be inferred, that each cerebral organ is the moving power of some part of the corporeal system? We have seen that over excitement of the organs must be relieved by some process or another, whereby the superabundant action of the blood in that part may be drawn off or absorbed, and cerebral oppression or delirium prevented. Tears are one means, laughter another. But there are many besides. Pain must excite some organs of the brain, because it produces delirium, fainting, even idiocy, and other affections primarily of the head. Pain has a universal language—screams, groans, yells; and the patient who, during

* Dr. Millingen, from whose work these quotations are taken, properly observes, "Vigilance in sleep is still awake; but her assistance is of no avail until the connection between mind and body is aroused by any alarm from external agents."

a cruel surgical operation roars most lustily, makes the best recovery, and is least likely to become delirious. Ecstatic joy evacuates itself in shouts, or "crows like chanticleer," especially in children. The lower animals have uniform cries for the excitement of each separate passion; and when one propensity is active, they never adopt the sound peculiar to the expression of another. We find a still more remarkable peculiarity in gestures, to the elucidation of which, Phrenology has been much indebted to Dr. Spurzheim and Mr. Combe, but still more to Dr. Gall.*

Each organ of the brain gives its peculiar attitude to the whole body, and regulates posture, if it do not go further, and form the source and centre of equilibrium.† Firmness, when inordinately large, and weakly counterbalanced, gives the attitude a stiff, straight, perpendicular rigidity, which produces the appearance of poker-swallowing. Self-esteem throws the whole body and head upward and backward.‡ Love of Approbation produces a rolling motion of the back part of the head and of the body. Combativeness arches the neck, seen in men, but better in horses or turkey-cocks. Destructiveness produces an abrupt shaking of the head, quite marked in extreme rage, and very palpable in beasts of prey, which shake their victim from side to side, and set back their ears, which are immediately below the organ. Wonder raises the eyebrows; and Secretiveness looks askance, in the direction of the organ. This is all involuntary, uniform, appropriate, and universal. Why is this, but that each cerebral organ has its own nerves of motion and relative muscles?

Diseases of various parts of the body excite particular organs of the mind, attack these alone, and leave the others perfectly free. *Delirium tremens* seems to excite the organs of Wonder, Form, and Colour alone, leaving the rest untouched. Hence, the little imps, grinning demons, and plagues of black flies that encompass the patient. Consumption excites powerfully the organ of Hope, the patient entertaining no doubt of speedy recovery, and forming the brightest prospects of the future. Some affections of the heart excite exclusively the organ of Destructiveness. "Henbane," says Dr. Simpson, "in large doses excites a remarkable form of delirium, characterised by revengeful and fearless mania, and hence called by the ancients *altercum*. Filices, or love potions, have undoubtedly excited the organ of Amativeness.§ Terror has made the hair grey in a single night. Certain herbs, as we have already seen, produce loss of memory, the other powers remaining unaffected. Hypochondriasis, an affection of Cautiousness and Hope, is produced by over-feeding. Physicians can no doubt enumerate many more examples of local affections exciting only single mental faculties.

We have already observed, that the Temperaments are indicated by the secretion of different parts of the blood in unequal relative proportions; that the Lymphatic is characterised by a predominance of serum; the Sanguine, by that of the vital or red particles; and the Bilious, by the superabundance of fibrin, the principal element in the muscular tissue. We found that this selection of secretion arose from the action of certain nerves in one individual, and of different ones in another; that these

* Vimont has very properly exposed the attempt of Spurzheim to arrogate to himself the merit of discoveries which are due altogether to Gall, the proper founder of the system. After quoting from Spurzheim the statement that "Gall avait indiqué plusieurs relations qui existent entre les divers talens et caracteres de l'homme et des animaux, avant que je fusse assez heureux pour faire sa connaissance;" Vimont adds, "*Plusieurs relations! vingt-sept facultés!*" We have only to peruse the works of Gall in order to satisfy ourselves how absolute was his title to the origin as well as to the formation of Phrenology; how superior were his powers of analysis to those of his assistant; and how entirely indebted the latter was to the former for all that is really valuable in his works.

† This is a speculation of much importance. If we can conceive of all the organs of the brain being abstracted, we feel conscious that progression would be impossible. We see that congestion of an organ on one side produces an annihilation of the powers of corporeal motion on the other side of the body. We observe, that when the lobes of the cerebellum are diseased, the patient falls back in the direction of the organ in a fit. When it is affected partially on one side, an involuntary motion of the arms is the consequence, and so forth.

‡ "I know no people, no race of men, in whom pride does not carry its head high, does not raise all the body, and cause the man to elevate himself on his feet in order to appear taller."—Engel.

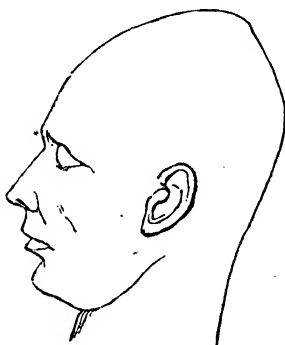
§ Fourcroy and Vauquelin attribute the same effect to phosphorus; and Juvenal—

"*Grandia quæ mediis jam noctibus ostrea mordet.*"

Abelard also,—" *Verbera quandoque dabat amor, non furor; gratia, non ira.*"

nerves had their source and seat in the brain, which, divided at least into thirty-seven parts, possessing each distinct functions, rendered the conjecture probable, that the nerves which proceeded from each were modified in their action and energy by the peculiar structure of the individual organ from whence they proceeded. We have now to maintain, that the Temperaments, or, in other words, the peculiar proportions in which the different elementary components of the blood are secreted in the system, are the result of the predominance of individual organs.

We have before remarked, that the Bilious Temperament is characterised, not by activity, which is the feature of the Sanguine and Nervous constitutions, but by durability of brain, whereby much mental excitement and labour are sustained without fatigue. We also conjectured that it was connected with those nerves which select and produce the predominance of the fibrinous portion of the blood, whereof the tough, hard, muscular part of the system is composed. From our first examination of the doctrine of the Temperaments, it occurred to us, that as Nature makes nothing in vain, she must always suit the instrument to the office it is destined to perform. What, for example, would be the use of a large developement of the organ of Firmness in a brain altogether Lymphatic? There would be the disposition to persevere and to hold an onward course, in a brain not capable of sustaining continued action in one direction for an hour together. What would become of the American Indian, who will nurse revenge for ever, watch an enemy for days, months, years, and laugh at his foes while they inflict on him the most protracted torments, if his brain were Lymphatic? The mental exertion would exhaust it in a short time, and he would persevere no longer. We find, however, that the American Indian is remarkable above all races of men for the developement of the organ of Firmness, and exhibits a specimen of the purest Bilious Temperament in his tough, hard, unencumbered sinews. Robert Bruce was similarly endowed with large Firmness, and a fine muscular Temperament. President Jackson's Firmness amounts to obstinacy and infatuation. His nickname of Old Hickory, is pretty descriptive of his muscular constitution. So, of the Spaniards—obstinate, lazy, fibrous. The Duke of Wellington is all fibre and all firmness. Being accidentally informed by one of the public prosecutors, that a man had been apprehended who was celebrated all over the County of Stirling for his great muscularity, and his wonderful feats in leaping, running, and wrestling, we did not hesitate to say that he would be found to possess the organ of Firmness in a high degree of developement, as his powers appeared to indicate a singular endowment of the Bilious Temperament. While lecturing at Falkirk, the individual (Miller) was hanged at Stirling, and a cast having been procured, it accordingly turned out that that organ was enormously large in the developement, surpassing considerably that of all the heads in the collection of the Edinburgh Phrenological Museum, as may be seen from the very accurate sketch of it here given.



The very word, Sanguine, seems to indicate at once the organ by which the corresponding Temperament is indicated. An agreeable excitement of the feelings cannot exist without a rapid and healthful play of the blood through the brain, and a habitual supply of it. Long before Phrenology was known, Sanguine was a term

convertible into the word hope, the former being indeed just the latter in a state of excess. While the organ of Firmness, then, seems, when large, to command nerves proceeding from it to the assimilating organs, to convert the juices into the fibrous portion of the blood, and through that means to produce muscle, a great developement of that of Hope appears to indicate the predominating activity of those nerves in the system which select the vital or red particles of the blood. It is to be remarked of this organ, that it has a more powerful effect on the bodily appearance than any other, and that a mere average developement of it will show itself in the constitution more palpably than any other. When, therefore, Hope is developed to the value of only 14 or 15, the bodily appearance will palpably manifest the Sanguine Temperament, however large the other organs may be. Thus, should Hope amount to 14, and Firmness to 20, the eyes will be light coloured (blue or grey), and the hair black or dark. But should Hope be only 8 or 10, and Firmness 20, both hair and eyes will be dark, the latter being neither grey nor blue. We have been in the habit of predicating the colour of these parts of the body upon this principle, in the subjects of casts or developements sent us, and have not found ourselves mistaken. If the Hope be large, with small Firmness, in mature manhood, the complexion will be ruddy or red. If Firmness be large, and Hope average, the hair would in boyhood be fair, but probably be dark at maturity.* After the most careful examination which we have been enabled to bestow upon the subject, it appears to us, that the Nervous Temperament is chiefly indicated by the predominance of the organ of Cautiousness. Fineness in the texture of the skull is supposed to be indicative of fine texture of brain, which latter is pronounced to be the exponent of the Nervous Temperament. Both of these particulars are united in the female character. The largest developement of Cautiousness, to be found in the collection of the Edinburgh Phrenological Society, is in the skulls of the Cingalese, the texture of which is as fine almost as porcelain. The largest national developement of Cautiousness, is in the skulls of Hindoos, and the texture of these is extremely fine. Mr. Combe, in a table of measurements of national skulls, states the extreme length of the Hindoo skull at $6\frac{1}{2}$ inches; that of the New Hollander $7\frac{1}{4}$ inches, being $\frac{3}{4}$ ths of an inch in favour of the size of the latter. Their measurement from Cautiousness to Cautiousness is, Hindoos, $5\frac{1}{2}$ inches; New Hollander, $4\frac{1}{4}$ inches, being $\frac{3}{4}$ ths of an inch in favour of the Hindoos absolutely, but relatively to their respective lengths of head, no less than an inch and a-half in favour of the relative size of Cautiousness in the Hindoo skull. Mr. Combe then remarks, "the effects of Temperament are distinguishable in national skulls. The grain of the New Holland skull is extremely rough and coarse; that of the Hindoo, fine, smooth, and compact, more closely resembling ivory." In all stages of society, those persons whose minds and conduct manifest the presence of the predominance of the organ of Cautiousness, are most remarkable for continued susceptibility of emotion, and sensitive rapidity of thought, which are indicative of the Nervous Temperament. Infants possess this organ always very largely, and they are in the greatest degree nervous. Caspar Hauser is an example of the highest order of the Nervous Temperament, and by watching his case attentively it will be seen, that his sensibility was occasioned altogether by the susceptibility of his system under the action of external impressions. The Nervous man has a very thin skin; little encumbered with flesh; skull very thin, and its integuments extremely slight. His whole frame appears to be conceived upon the plan of rendering him very susceptible of *external impressions*, and acute in his senses.

* Bichat and Richerand have revived a method of measuring the intellectual faculties spoken of by Plato: according to whom, men, and other animals that have long necks, possess intellectual faculties inferior to those of others; because, the brain being more remote from the heart, must experience a less degree of irritation through the medium of the blood. This proposition we conceive to be correct in principle; and it is certain, that tall men, whose bodies require their blood to be spread over a greater surface than little men, are less active-minded, because a smaller share can go to the brain; and their pulse, as a general rule, is slower, indicating a more languid circulation. The pulse of a child is extremely rapid, as is that of all young and small animals; and a child is far more joyous, happy, and sanguine, than a man whose circulation is slower. In consumption, the circulation is greatly accelerated, and the patient is always in the most agreeable state, forming the brightest expectations. It would be well worthy the attention of physicians, to ascertain, if persons with a very low developement of Hope are ever attacked with consumption; and if Firmness is at all affected in cases of cholera, in which *muscular* contortion forms a prominent feature. In this disease, the *serous* and red particles of the blood are found to be wanting, and nothing but the fibrin is left.

Having no rich endowment of blood, the spontaneous solicitations and internal and involuntary activity of the faculties, is not likely to disturb him as it does the Sanguine man; but the delicacy of his fibres will respond to the slightest external vibration, and call up the blood to assist in the excitement.*

The Lymphatic Temperament may be said to be rather the absence of the rest, than the presence of a positive constitution. It is caused by the joint operation of tardy circulation and imperfect oxygenation, the result of a confined chest and feeble heart and lungs. Hence the blood is neither endowed with a sufficient proportion of fibrin, nor of red particles, but of that serum which we observe in dropsy, a disease of the circulation, and which is sometimes relieved by friction, whereby the circulation is increased. It is probable that it will be found to be accompanied by deficient Firmness, Cautiousness, and Hope, the negation, in short, of the other Temperaments. The Lymphatic man we conceive not to be naturally fat, for that is something positive—nor lean, for that prefigures something that is determinate. He is the impersonation of immobility and neutrality—expressionless—indefinite—neither capable of obesity, nor of being much reduced—to be embraced in the category of those *wersh* or *wooden* personages who are ciphers in society.

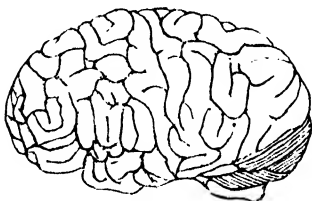
The effect of the combination of the Temperaments may now be readily understood. The Nervous or Sanguine constitutions predominating, with deficient Bilious or Fibrinous structure, will produce that activity without endurance, which will soon wear the system out, and give rise to inaction, produced by exhaustion or disease. The Bilious Temperament without the Sanguine, will be durable, but without elasticity, or the elements of renovation; the mind will work long, but will not work intensely. Not Nervous, its operations will be little affected by the external world; and although continuous, will be less rapid. Combined in due proportions, there will be sustained exertion, rapidity of thought, strength and intensity of emotion, susceptibility of external impressions, and spontaneous internal activity.

CHAPTER IV.

THE PROPERTIES OF THE BRAIN.

SECTION I.—*The Duality of the Organs.*

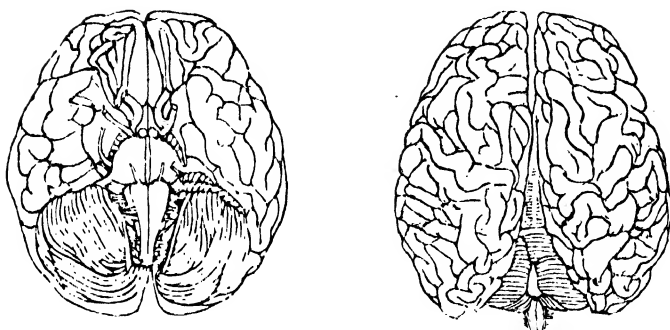
THE doctrine next in the order of the demonstration, is, that all the organs of the brain are double. From the different sections of the encephalon here exhibited, it



* Another source of activity must especially be remembered, the effect of hereditary transmission of the exercise of particular organs. Children born in time of war have become warlike, without any higher developement of the organs of attack and defence than those born in peace. But a habitual exercise and stimulus of organs by parents, and their placing many into a state of inaction, transmits the predisposition to the stimulus of the former, and the disregard of the latter. Dogs transmit habits. Paulina bids the courtiers remark, that Leontes' infant had

“The very trick of his frown.”

Sons will catch themselves, long after their father's death, speaking in his very tones—in the same attitude, expression, smile, or laugh. Persons with no great developement of those organs which produce benevolence and hospitality, will be found to display more of these qualities than was to be expected from their appearance, if their parents were generous. This is a hereditary predisposition towards the activity of certain faculties.



is apparent that it is what physicians call symmetrical, or exactly shaped and proportioned. It is divided into two perfectly equal parts called hemispheres, and each side or half, is substantially a counterpart of the other. "The organs," says Dr. Southwood Smith, "of animal life are symmetrical. The brain and the spinal chord are divisible into two perfectly equal parts. The nerves which go off from these organs, for the most part, go off in pairs, equal in size, and similar in distribution. The trunk, so important an instrument in voluntary motion, when well formed, is divisible into two perfectly corresponding portions. The muscular apparatus of one-half of the body is the exact counterpart of that of the other; while the arms, the hands, and lower extremities, are not only double, but the organization of the one is precisely similar to that of its fellow." Sir Charles Bell, to the same effect, states, "that whatever we observe on one side, has a corresponding part on the other; and an exact resemblance and symmetry is preserved in all the lateral divisions of the brain. And so, if we take the proof of anatomy, we must admit, that as the nerves are double, and the organs of sense double, so is the brain double, and every sensation conveyed to the brain is conveyed to the two lateral parts, and the operations performed must be done in both lateral portions at the same moment."

Wherever the parts of the body are symmetrical, we learn from these quotations, that each part performs a function of the very same nature as its counterpart. The nerves which go off to one arm, perform precisely the same function as that performed by those which go off to the other arm. The nerve which goes to the one eye, conveys objects to the brain in the very same manner as the other; and so of the olfactory and auditory nerves. It being admitted that the brain consists of two parts which are symmetrical, the conclusion is irresistible, that the function performed by the one hemisphere is exactly the same as that which is done by the other. As we are not conscious of the existence of two nerves of sight or hearing, but the impression from both is single, so is it not to be concluded, that because we have two organs of thought, we should be conscious of two sets of ideas exactly similar. As the optic nerve of one eye, or the sensorial nerve of one arm, may be destroyed without obliterating the faculties of touch or sight in the other; so the partial destruction of one side of the brain, if the counterpart be in a healthy state, should not, as indeed it does not, abrogate the action of thought in the other. Proper attention to the legitimate inference which may be drawn from this proposition, will enable the inquirer to answer to himself, and to less ingenuous objectors, many difficulties which have been stated to the truth of the general principles of Phrenology, founded upon the fact, that injuries of the brain have occurred which have not sensibly altered the mental manifestations. These, of course, have occurred in one hemisphere, while the other, like a remaining eye, or nostril, has performed the functions of the mind. Dr. Gall, and after him Dr. Combe, have carefully examined all the cases cited by hostile physiologists, for the purpose of overturning the system, and have most satisfactorily explained them upon this principle, in a manner perfectly in harmony with the general doctrine. Dr. Syme, the celebrated surgeon, deserves to have it recorded to his honour, that although an anti-phrenologist, he exhibits to his class, as worthy of remark in reference to the doctrines of that science, the case of a man whose brain, injured on one side only, exhibited the ordinary

mental manifestations, but *both* organs of language having sustained lesion, he failed to manifest the power of conversation, or the appreciation of words. It would lead to a medical inquiry, too tedious to be inserted here, to notice the facts and arguments which have been urged on both sides of this question. We shall only observe, that any man who can be hardy enough to contend that the brain is of no use, or that one ounce of it serves exactly the same purpose as a pound, is a dialectician with whom we have no desire to engage in controversy of any kind. These positions all physiologists constructively and inferentially maintain, who assert that injuries of the brain have occurred in both hemispheres, without producing any effect upon either mind or body, or who allege that the whole brain has been removed, while all corporeal and intellectual functions have been conducted with the same regularity as before. What do these gentlemen—who seem to carry the Row heresy into physiology, and to suppose that the spirit is quite sufficient to the performance of all bodily evolutions, without even the use of means—make of the brain? Do they suppose that the skull would be as well if it were stuffed with cotton? Or when they are endeavouring to disprove the assertion, that

“When the brains are out the man will die,”

are they reasoning from their own case, and calling upon the world to take notice that they are alive and hearty? Let not these men be allowed to go at large without being called upon in presence of such friends as Providence may have sent to take care of them, for a categorical answer to the question—*What is the use of brains?* They contend that no difference appears in the discharge of all organic functions, and that every corporeal process takes place, when there is no encephalon, equally as when the skull is as full as it can hold. We are driven, then, inevitably to the alternative of maintaining, either that the *mind* is the faculty of which the brain is the organ, or that the latter is of no more use than so much cold porridge. We grant that it is often applied to much worse purposes, and to none more absurdly, than when it is occupied in the defence of the proposition, that it is made for no end whatever.

With regard to the use of a double brain, many conjectures have been made by Phrenologists. Mr. Hewett Watson supposes that the one side may perform the office of perception, and the other of memory. “I should be induced,” he remarks, “to regard perception as the active state of either of the corresponding intellectual organs. Attention might be supposed to rest in the combined activity of the two organs, directed to the same matter. We see with one eye, and look with both. The sense of resemblance might depend on the two corresponding organs coexisting in the same state, though individually excited. Sympathy would arise when the same occurred to the affective organs. The sense of contrast and discord would imply the opposite states. Memory seems nearly allied to comparison.”

Relative to this curious subject, many interesting facts have been ascertained. “A minister,” says Gall, “at Vienna, was attacked during three years with the same disease (alienation of one entire side of the brain); he communicated to me an account of it; he described minutely the manner in which each side of the brain was affected. On the left side he continually heard insults uttered against him, so that he always turned his eyes that way, although, with the right side, he distinctly perceived that these sounds came from no other source than a derangement on the left side of the head. When he had a fever, he was incapable of combating the illusion. For a long time after his recovery, whenever he drank wine to excess, or abandoned himself to anger, he perceived, on the left side of his head, the signs of a relapse. At Paris, I attended a young lady, who frequently expressed to me her apprehension of falling into *dementia* on one side of her head, because she observed that the process of thought was not the same on this side as on the other. Another lady, a woman of infinite sense, made nearly the same remarks to me; she distinctly felt, she said, that she perceived every thing differently with her left side from what she did with the right; that every thing affected her differently on different sides. She told me, that sometimes her faculty of thinking was completely shackled on that side, and that this inability was accompanied by an icy stupor: it seems to me (these are her own words, and she applied her hand perpendicularly upon the middle of her forehead)—it seems to me; that from the front to the back of my head, the brain is divided into two distinct halves. Neither of these ladies had the least knowledge

of the cerebral structure, or of my physiological discoveries. A physician, with whom I studied in Vienna, frequently complained that he could not think, except with one side of his head; he felt distinctly the inefficiency of the other side. Indeed, the weak side was much less elevated, and much narrower than the other." We have noticed the case mentioned by Dr. Beattie, of a learned man, whom a blow on the head made to forget Greek, but nothing else; and of Dr. Abercrombie's patient, who, on a similar misfortune, forgot nothing but the fact that he had a wife and family. Sir Astley Cooper knew a German sugar-baker, who, in the early stage of a cerebral complaint, spoke English, but at last only German. So of a man in St. Thomas's Hospital, who, after a blow upon his head, was found talking in a language unknown to all, until a woman recognised it as her vernacular, which was Welsh. The accident destroyed his recollection of English, the only language he could speak when in health. When he recovered, he lost all power of conversing in Welsh, the only language which, in his illness, he could use. Dr. Rush observed, that many of the old Germans and Swiss of Pennsylvania, who had not spoken their native language for fifty or sixty years, and who had probably forgotten it, would often return to it in time of sickness. He also noticed an Italian, who, in a fever, of which he latterly died at New-York, spoke English in the commencement of his disease, French only in the middle, and on the day of his death, Italian. Tiedmann says of a person, named Joseph Moser, that he was insane on one side, and observed his insanity with the other. Numbers of madmen hear angels singing, or devils roaring, only on one side. Dr. Caldwell mentions, that another case, perfectly analogous to that mentioned by Tiedmann, exists in Kentucky, not far from Lexington. Several others are noticed on authority that must be respected. Forster says, that "some curious facts in dreaming, too numerous to be detailed here, seem to show that the organs of one hemisphere sometimes become vigilant, while those of the other become dormant." Boerhaave, Haller, and Van Swieten, commented on the duplicity of the senses and of the brain, and consequently, on the plurality of the organs.

Dr. Hewett Watson observes, that, "besides dreams remembered in waking hours, he is perfectly conscious of certain trains of ideas, repeated again and again, during different intervals of sleep; yet, when he is awake, not the most vague notions can be formed of them, beyond the mere conviction that such ideas have existed. They are again remembered, when again repeated; and this remembrance, he thinks, is accompanied by a knowledge that the recollection of them has been vainly wished since they were last formed or felt." Dr. Abel knew an Irish porter, who forgot, when sober, what he had done when he was drunk; but upon again becoming intoxicated, recollected what he had done when drunk before. He lost a valuable parcel when in a state of liquor, and when sober could give no account of it. Upon again recurring to his favourite pursuit, he remembered perfectly where he had left it, and thus regained possession of it. Lord Monboddo cites the case of a girl in the neighbourhood of his estate, whom he often saw in a state of somnambulism, perform surprising feats with her eyes quite shut; and adds, what I have said of this girl *remembering nothing of what passed while she was in the fit, is the case of all night walkers.*" Dr. Abercrombie, after enumerating similar examples, observes, "another very singular phenomenon presented by some instances of this affection, is, what has been called rather incorrectly, a state of double consciousness. It consists in the individual recollecting, during a paroxysm, circumstances which occurred in a former attack, though there was no remembrance of them during the interval." In the example cited in the Edinburgh Philosophical Transactions, Dr. Dyce, to the same effect, states, "the remarkable circumstance was now discovered, that during the paroxysm the patient had a distinct recollection of what took place in her former paroxysms, *though she had no remembrance of it during the intervals.*" The next case is reported in the "Medical Repository," by the Rev. Timothy Aldin of Pennsylvania, as communicated to him by Dr. Mitchell, the physician of the patient. Miss R—— possessed naturally a very good constitution, and arrived at adult age. She had excellent abilities, was a good housewife, obtained a fine education, and wrote a beautiful hand. She had a capital memory and a well-stored mind. Suddenly she fell into a profound sleep, which lasted several hours longer than usual. On waking, it was found that she had forgotten every thing she had acquired; her memory was as a sheet of white paper; all vestige of words and things was totally obliterated. Her education, it was found necessary to begin again. She acquired, by

new efforts, spelling, reading, writing, and calculating, and gradually became acquainted with the persons and objects around her, like a being for the first time brought into the world. In these exercises she made considerable proficiency. After some months, another fit of sleep overtook her. On rousing from it, she found herself restored to the state she was in before the first paroxysm; but was wholly ignorant of every event and occurrence that had befallen her afterwards. The former condition of her existence, she now calls the old state; the latter, the new state; and she is as unconscious of her double character as two distinct persons are of their respective natures. For example, in her old state, she possesses all her original knowledge; in her new state, only what she has acquired since. If a gentleman or lady be introduced to her in the old state, and *vice versa* (and so of all other matters), to know them satisfactorily, she must learn them in both states. In the old state, she possesses fine powers of penmanship; while, in the new state, she writes a poor awkward hand, having not had time or means to become expert. During four years and upwards, she has undergone periodical transitions from one of these states to the other. The alterations are always consequent upon a long and sound sleep. Both the lady and her family are now capable of conducting the affair without embarrassment. By simply knowing whether she is in the old or new state, they regulate the intercourse, and govern themselves accordingly.”* In the still more extraordinary case of Miss Jane C. Rider, reported in the American Journal of the Medical Sciences for August 1834, it is observed, “Pain in a circumscribed spot on the *left side of the head*, was generally, if not always, an attendant on the paroxysm, and frequently occasioned a degree of suffering almost beyond endurance.”

These very extraordinary and interesting cases suggest curious points for observation. It will be observed, that, in the more marked instances, a profound sleep always preceded the changes. This is a very common, and indeed almost invariable result, of mental fatigue. We have already seen that the brain is divided into two perfectly equal proportions, and that all the organs of the faculties are double. If we suppose, that in the examples above quoted, only one hemisphere of the brain was exercised, and did all the mental duty, this will easily account for all the organs on that side being over-fatigued. The natural result of this is a deep sleep. That hemisphere of the brain which, for the sake of hypothesis, we may suppose not to have been exercised, having long rested, and now being ready for action, receives its stimulus, awakens the patient, and she recovers consciousness. But the hemisphere through which she had formerly felt, perceived, and reflected, still continues asleep, and the awakened hemisphere having been without exercise, has every thing to acquire. Education and reflection have to be begun, as it were, anew. The hemisphere is as that almost of an infant, and having too much to do it becomes exhausted; a new sleep comes on; the other hemisphere awakens refreshed; and the former consciousness and advanced education recur. Thus may the old and new states be accounted for, upon the theory of the organs of the brain being double, but upon no other hypothesis. If it be said, that it is impossible to suppose that a whole hemisphere of the brain should, as in the last case, lie dormant for sixteen years, without being altogether diseased, let us remember the case of the man whose optic nerves had been dormant for forty years, and who, upon being couched by Cheselden, found them active, sound, and healthy. The cases of Caspar Hauser, and of the old Swiss and Germans, who resumed a language they had forgotten for sixty years, upon being attacked by fever, render this phenomenon not at all extraordinary, especially if it be adverted to, that some persons complained that they could only think with one side of their head.

SECTION II.—*The Anatomical Appearances of the Brain and Skull.*

THE brain is formed before the skull, and has three coverings, of a thin pliant substance, denominated membrane. That which is next the brain, is called the *pia mater*; sinks down and fits into the *sulci*, or cerebral convolutions, and takes in along with it all the blood-vessels to the several parts of the encephalon. The

* If there be room, a few more examples will be given in the Appendix.

middle one is termed the *tunica arachnoidea*, resembling a spider's web, which, like a cloak, covers, but does not fit into, the sinuosities of the shape of the brain. It secretes matter to lubricate the *pia mater* below it, and the *dura mater* above it; the latter of which coheres to the inner surface of the skull, although fitting closely upon the brain.

The skull commences to make its appearance in gradual deposits of bone upon the brain, which are extremely like thin frost, radiating from a centre upon a window, and at last entirely cover it. The cranium consists of several bones, which divide it into portions connected together by means of teeth or sutures, as they are termed, calculated to give strength when united, but to yield and open the more readily when the brain enlarges. It grows exactly as the brain increases; follows its shape wherever it alters or increases; yields whenever it presses from within; is small as the brain is at birth, and grows large as it does at maturity. The skull follows the rule of all the parts of the body, in which the soft substances uniformly shape and give figure to the hard ones. The skull is meant to be a protection to the brain, and nothing more; and it is evident, that if when the brain grew, it did not yield in the exact proportion in which the brain advanced, the latter would become inflamed, and madness would ensue.* But that it does so yield is evident from numerous cases of water in the head, in which, from the mere presence of this fluid, the skull enlarges to an enormous size.

A thin membrane, called the falciform process of the *dura mater*, suspended edge-ways and perpendicularly from the front to the rear of the centre of the inner coronal surface of the skull, divides the two hemispheres of the brain from each other through their whole length, and for about two-thirds of their depth, and also separates the cerebellum from the cerebrum, being at that point of separation, called the *tentorium*. As the brain gives form to the skull, of course it fits exactly into it. Above the inner plate of the cranium, and joined to it, is a thin honeycomb-looking process, called the *diploë*; above which, and also joined to it, is the outer plate or table of the skull. These plates, although not perfectly parallel, are sufficiently so for all practical purposes, with the exception to be afterwards noticed, and also of cases of disease. Its variation seldom amounts to more than one-eighth or a ninth of an inch, while the differences in development of single organs, amounts to an inch in the larger class, and to three-eighths of an inch in those of the forehead, where there is the smallest deviation from parallelism. The sutures also interrupt perfect uniformity of surface, but they are easily detected, and present no difficulty to a practised Phrenologist. Besides, the size of the organs is not estimated by mere protuberances in the skull, but by the breadth and length of its surface at the situation of each; so that the want of perfect uniformity of superficies does not present any very serious objection to the certainty of manifestation. Many heads developed in a high degree, often present no protuberances at all; and were the organs all of equal size and activity, this would uniformly be the case.

Along the base of the forehead, there runs, in some cases, what is called a frontal sinus, a cavity betwixt the inner and outer plates of the skull, which produces a deviation from parallelism betwixt them. The *diploë* is absorbed, and the hollow is greatest at the root of the nose, extending half an inch upward, and sometimes an inch or more laterally on each side. The greatest number of organs embraced in the sphere of sinuses, is properly not more than five—Individuality, Locality, Form, Size, and Weight. The organs of Form and Size extend laterally as well as outwards, and their dimensions may therefore be judged of by their breadth partially, which is not affected by a sinus projecting merely superficially. It is never known to exist in persons under 14 years of age, and rarely in females. Wherever the external appearance of the skull indicates the organs in the region of the sinus to be small, there can, of course, be no difficulty in predicating a deficiency of the corresponding faculties. The difficulties of judging are thus reduced to comparatively a few cases of the

* Byron's skull did not yield to his brain sufficiently, and he was always at high pressure, and on the borders of madness. We informed an eminent literary and medical friend, that his skull appeared too small for his brain, and that he was surely subject to threatenings of *phrenitis*. He acknowledged that this was the case. We impressed upon him the necessity of taking much more bodily and much less mental exercise, and for a short time he followed this course; but having afterwards abandoned it, he fell a victim to his disregard of this principle.

positive of the proposition. But a practised Phrenologist will have no great difficulty, from the very form of the brain, in detecting the existence of a sinus, in which he will be further assisted by the tones of the voice, which are deeper and more nasal where there is a sinus, than where there is not.

The brain consists of two soft substances, presenting different appearances. The interior part of the brain is of a white colour, and fibrous in its texture. The material of which it is composed, is called medullary. This is covered with the exterior part of the brain, which is also soft, and of a cineritious colour, so called from its presenting a greyish appearance, resembling ashes. Both are intersected with blood-vessels; but the latter has a much larger supply than the former, and is supposed to be more immediately connected with the thinking principle. The cineritious and medullary parts are abrupt and defined in their junction. It has been already explained, that the brain consists of convolutions, varying in number and depth with the intelligence of the animal. Those of the two hemispheres, are connected by fibres formed of, and proceeding from, the medullary substance, of which the interior of the brain is composed; and fibres of a similar kind, and from the same source, form the origin of the *cerebellum*, and so connect the larger and lesser brain with each other. Each hemisphere is supplied with separate arteries to convey the blood to it. The *cerebellum* is similarly endowed, while the veins which return the blood to the heart, are common to all.

SECTION III.—*The Amount of Volume of Brain a Condition of Intellectual Competency.*

WE have found that the size of the brain is the measure of its power. It is also necessary to attend to the question—What size of brain is necessary to produce reason, and to remove the possessor from the condition of idiocy? It is a consequential corollary from the proposition of size being a measure of power, that *a certain degree of size* is necessary to produce that amount of reason or mental energy, which we agree to recognise as the attribute of a sane individual. There is no doubt that idiocy may coexist with the presence of a large head; but this will be in spite of its size, from disease, water in the head, or some disorder of the nervous system, arising from constitutional inheritance, early bad habits, or accident. We know, that upon any great shock happening to persons of brilliant minds, by fear, sudden joy, or appalling calamity, the brain has become diseased, and idiocy has followed.* But even where there is, and has been no disease of any kind, and where the brain is perfectly sound and healthy, it requires a certain amount and quantity of brain, to produce the degree of mental power necessary to remove the individual from the state of idiocy. A child's brain is not nearly so large as that of a man, and it has accordingly much less intellect. If his brain were of the same size, and as soft in texture at the age of forty, as at the age of seven, we would at once pronounce him an idiot. This is more palpable, when we consider the condition of mind. That amount of intellect which we would consider as even precocious in a child of seven years of age, we would pronounce absolutely idiotic, if manifested by an adult. So it is with permanent incapacity, which, in truth, is but everlasting childhood, from a childish brain. Hence the creature is called an innocent. Dr. Gall maintains that there is no exception to the rule, that a man's brain which measures round horizontally immediately above the ears, no more than fourteen inches, is always an idiot. Dr. Voisin of Paris, who has made many observations on the subject, avers that in the lowest class of idiots, the circumference varies from eleven to thirteen inches, and the measurement from the root of the nose to the

* "If a mother," observes Dr. M'Nish, "is subjected to annoyances, which fret and irritate her, the offspring will run a strong risk of inheriting the temper similar to that under which she laboured, during the time of gestation. Pinel mentions, that out of ninety-two children born after the blowing up of the arsenal at Landau, in 1793, eight were affected with a species of cretinism, and died before the expiration of the fifth year; thirty-three languished through a miserable existence of from nine to ten months' duration; sixteen died on coming into the world; and six were born with numerous fractures of the larger bones."

occipital spine over the top of the head, from eight to nine inches. In those where the individual was just on the wrong side of idiocy, denominated in this country *silly*, the circumference was seventeen inches. Where it amounts to eighteen inches, the intellectual manifestations barely save an adult from the class of idiocy, there is such a great absence of power. Drs. Pinel, Elliotson, and Brigham, all concur in this statement. In a fair-sized head of adult age, the circumference, horizontally, is from twenty-one to twenty-two inches, and over the head from twelve to fourteen inches. In more powerful characters, the circumference is twenty-two and a half, twenty-three, twenty-four, and in the case of Rammohun Roy, twenty-five inches. The measurement over the top of the head, from the root of the nose to the occipital bone, is fourteen, fifteen, and even sixteen inches.

SECTION IV.—*Lesions of the Encephalon, and the Results.*

INJURIES of the brain produce often two very opposite effects. Hildanus knew a boy, ten years of age, who manifested great intellectual powers, and part of whose skull having been driven in, he became stupid, and in that condition died at the age of forty. The aéronaut, Blanchard, previously a man of quick parts, fell upon his head, and from thenceforward became stupid; his brain, upon death, having been found also diseased. A lady of great talents, wounded the back of her head, and from that period lost all her former brilliancy. Such are the effects of injuries of the brain on persons who had antecedently manifested superior talents. Let us now observe the result of such accidents on individuals who were previously dull.

Father Mabillon was so stupid, that, at the age of eighteen, he could neither read nor write, and had even some difficulty in speaking. In consequence of a fall, it was necessary to trepan him. During his convalescence, a copy of Euclid came into his hands, and he made rapid progress in the study of mathematics. A lad, up to his thirteenth year, was irreclaimably stupid; but, falling from a staircase, he injured his head, and thenceforward exhibited very superior abilities. Another lad at Copenhagen, who, up to the age of fifteen, had also been remarkable for hebetude, met with a similar accident, which produced the same result. Gretry, the celebrated musical composer, mentions, in his own memoirs, that he was indebted for his musical genius to a violent blow on the head, occasioned by the falling of a beam. Haller notices an idiot, who, having been seriously wounded on the head, manifested intelligence while the injury was under treatment, but became imbecile so soon as it was cured. Dr. Caldwell narrates, that a mechanic of Kentucky became much more intelligent after an inflammatory action of the brain, occasioned by a blow on the head. Dr. Priestley's son had his skull fractured by a fall, and immediately manifested a great improvement of intellect. "I knew," says Gall, "a girl nine years of age, whose head received a blow on the right side. From that time she complained of a pain which she felt on the left side of the head, and which corresponded to the place where the blow had been received. By degrees her arm became weakened, and almost paralysed; her lower jaw trembled incessantly; she was frequently attacked with convulsions. But as an offset to these misfortunes, her intellectual faculties had acquired an uncommon degree of vigour; and though she was only in her eleventh year, the features of her face, and her singularly sedate behaviour, would have made her pass for a grown-up woman." Haller had a patient attacked with inflammation of the eye, who acquired, in consequence, such energy in the organ of vision, during the course of his disease, that he could see even by night.

From these remarkable cases, we observe that injuries of the brain make stupid people clever, and clever people stupid. These results, so apparently contradictory, are to be accounted for upon the same uniform principle. It has been already seen, that the Lymphatic constitution, or, in other words, the Temperament of stupid people, is that in which the circulation of the blood is limited and slow. The brain, therefore, wants the stimulus supplied by ample sanguification, and the result is mental dullness. The Sanguine Temperament, on the contrary, or the constitution of clever, active-minded people, is that wherein there is an abundant supply of blood, and a rapid circulation. By these qualities, the brain is furnished with a high stimulus, and produces consequently brilliant intellectual results. If artificial means

were taken to increase the circulation of the blood in the brain, it follows that increased mental action would be the consequence. Thus, if the Lymphatic man take a quantity of wine or punch, we observe, that stupidity disappears; and so long as he is what sailors would term "a few sheets in the wind," he becomes a smartish conversable fellow. When the stimulus is removed, however, he relapses into his former lethargy. Thus the idiot, so long as the wound was uncured, and there was irritation, amounting to inflammatory action, or extra circulation of blood in the brain, manifested a rational intellect; but when a cure was effected, and the circulation consequently diminished, he again became idiotic.* Could a permanent stimulus in the Lymphatic Temperament be applied to the brain, we should thus expect that the intellectual activity would continue. Wounds in the head are just the very means of keeping up the stimulus, and making it permanent. It is a fact, perfectly ascertained in physiology, that injuries of any part of the body, particularly of the brain, increase the circulation of that part; produce a local excess of blood; create inflammation, and a permanent tendency to increased topical circulation. *Ubi stimulus, ibi affluxus*, has been a physiological axiom since the days of Hippocrates. In all the cases above recited, of dull or Lymphatic persons receiving cerebral injuries, the effect, according to this rule, was to produce that increased action of the blood, and that additional quantity in the brain, which was necessary to put them on a level in mental activity with individuals of the Sanguine Temperament. Placed on an equality with them in supply of blood and rapidity of circulation, they naturally manifested the same activity and intensity of intellect, by which the Sanguine Temperament is characterised.†

But it appears, that clever persons, by such wounds on the head, become stupid; and this is to be accounted for on the same principle. The Sanguine Temperament produces cleverness, mental activity, genius, by the abundant supply of blood to the brain, and quickness of circulation. Wherever we see uniform activity and brilliancy of mind, we may therefore conclude that the brain is highly endowed with rapidly circulating blood. This rapid circulation and enlarged supply, however, border on disease, just because of the increased quantity and celerity of circulation. The amount of blood, and rapidity of its course, place the brain only upon this side of inflammation and disease. The blood is already at its highest pitch of circulation. The brain cannot stand a greater amount. The effect of an injury on such a brain, is still further to increase the supply of blood and rapidity of circulation, beyond what the brain, already taxed to the utmost, can bear. Inflammation becomes excessive; it produces disease in the structure of the brain; and disease superinduces mental malady, stupidity, dullness. Hence, when the skull is opened after death, tumours, thickening of the bone, or other indications of organic decomposition, are invariably found. This principle is recognised and acted upon by physicians. If a patient have received a wound on the head, or be attacked with delirium, what is the treatment? The very fact of such a wound, or such delirium, is held to indicate over circulation, and over tendency of blood to the brain. The Temperament is changed; the diet is reduced; copious bleeding is adopted; and, for the time, the surgeon labours to reduce the Sanguine constitution to the condition of the Lymphatic.

* "We often see persons in *consumption* exhibit clear and powerful intellects; but, according to the researches of M. Desmoulins, the brain does not decrease in bulk or weight in this and many other chronic diseases."—*Andral*. On this statement, M^r Nish observes, "The constitutional irritation which exists in consumption, may communicate itself to the brain, and stimulate that viscus so as to enable it to act powerfully, notwithstanding the general wasting of the system. In inanition, where no disease exists to stimulate the brain, the mental powers are always impaired."

† Deafness often proceeds from a Lymphatic state of the apparatus connected with the auditory nerve. Thus, deaf persons, into whose ears the tardy circulation is attracted by heating a drum, can hear perfectly well any ordinary conversation during the time the noise is continued.

CHAPTER V.

THE ORGANS OF THE BRAIN.

SECTION I.—*Size of each Organ the Measure of its Power.*

It being established that the size of the brain is the measure of its power, it follows, upon the same principle, that the size of each organ in the encephalon, is the measure of its power also.

Each organ possesses, in its own nature, a relative size peculiar to itself. Thus, for example, the organ of Amativeness, situated in the cerebellum, is much larger in each head than any other organ. In a brain of due proportions, the organ of Benevolence is in itself as large as the aggregate of the size of any four of what are called the organs of Perception. In short, the natural size of the latter is much less than that of the former. Although the one is therefore naturally smaller than the other, they may each be equally powerful in the manifestation of the faculties which respectively relate to them. Thus, although the organ of Amativeness be naturally much larger than the organ which remembers places, the one may *recollect* as powerfully as the other *loves*; because, in proportion to their natural size, the one is as large an organ of Locality, as the other is of Amativeness. In like manner, the heart is naturally a much larger organ than the eye or the ear; but if the optic nerve be proportionally as large, in relation to its natural size in the system, as the heart is in the same body, the sight will be as keen as the circulation of the blood is perfect. Phrenologists have supposed, that because the different organs of the mind perform separate functions, there is reason to believe that there are circumstances of original structure, situation in the brain, depth and number of convolutions, texture, and fibrous susceptibility, which regulate the intensity, power, and activity of the organs naturally, without reference to their absolute size in the abstract. But it seems to be forgotten, that although the organ of Individuality may produce as powerful a memory, as that of Amativeness gives mastery to the passion of love, the act of recollection is in itself a far less masterful and overwhelming mental act, than the sentiment of all-absorbing passion in Juliet or Petrarch; and that as the organ of Amativeness is the largest in the head, its power in regulating the whole heart, mind, and affections, is as much greater than that of mere Perception, as the cerebral mass is larger in that region than in the section where are situated the organs of Size, Weight, and Colouring. "The organs of the Intellectual faculties," observes Mr. Combe, "are small, but active. If they had been as large as those of the propensities, we should have been liable to intellectual passions. The comparative calmness of our reasoning processes is probably the result of the small size of these organs."* Phrenologists have also conceived themselves warranted in concluding, that this doctrine is not meant to apply to the absolute quantity of brain which a faculty occupies. Thus, it is said, we may observe a heart of considerable size and power; but were it the heart of a giant, it might, in comparison to the natural size of his other organs, or to that of the heart of other giants of the same colossal dimensions, be diminutive. This, however, is also no objection to the doctrine. For place the same heart in the breast of an ordinary man, and it would be enormously large; or place the heart of a little man in the chest it occupied, and, it is evident, that it could not discharge the functions of circulation with nearly the same power, as that which properly belonged to it; so that *absolutely* the giant's heart was powerful; but *relatively* to its function, or comparatively to hearts of other

* An appeal may, no doubt, be made by the sceptical to the emotions produced in argument, in physical discovery, in forms, in music; but it will afterwards appear that these are not the work of the intellect, but the effects of its combination with the sentiments and propensities.

giants only, was it small. This strikes us more vividly, when we contemplate other objects. Thus, the organ of Destructiveness in the wasp, may be as large in proportion to its size, and to that of its other organs, as in the lion. But when we compare the abstract power of the organ, we see that the anger of the lion is as much more enduring, convulsive, and terrible, than that of the wasp, as the cerebral mass is greater. If, however, without reference to the size of organs in the abstract, we confine our attention to the case of a single individual, we find that each organ has a natural size of its own; that it bears a certain relative proportion to the rest in the same head; and that whenever it exceeds this proportion, it is more predominant, and whenever it falls short of this, it is more feeble than those which preserve their relative proportion to the general size of the particular cranium. It is its size relatively to that of the rest *in the same head*, and not the abstract amount of cerebral matter which it occupies, that determines its power in the character of the individual. Thus, for example, the tail of the elephant may be much greater in absolute length than that of the cat or the rat; while, in reference to the general size of each animal, it is much shorter, and less a predominant characteristic of its form. Thus also, the absolute size of the organ of Destructiveness, is larger in the head of Fox, Burko, or Sheridan, than in that of Bellingham, the murderer of Mr. Percival. But this does not affect the doctrine of size being a measure of power. It is a principle of Phrenology, that the largest organ in each head is that which craves for greatest excitement, and receives most gratification. The effect of the extreme and continued action of the largest organ, is to produce neglect of exercise of the rest, and so to attract the circulation as to diminish the supply of the sanguiferous stimulus necessary to their action. Hence, in a capacious head, where Destructiveness, although absolutely large, is relatively to Benevolence only moderate, the latter will monopolise all the action and stimulus, and leave the former inactive. But where Destructiveness, although smaller than in the former head, is larger than Benevolence and the other organs, it will appropriate the circulation and action, and exhibit the prominent feature in the character. But still, as in the cases of Burke and Bellingham, to illustrate the truth of the doctrine, that size is the measure of power, there was a greater *capacity* for manifesting overwhelming Destructiveness in the philanthropist than in the murderer. For, place them *in pari casu*—discontinue in Burke the action of, and stimulus to, Benevolence and the Reflecting faculties, and commence the exercise and habitual gratification of Destructiveness, and his fury and terrible anger would be much more overpowering than those of the smaller, but in this case predominant, Destructiveness of Bellingham.

SECTION II.—*Enumeration of Organs.*

THE discoveries which have hitherto been made of the organs of the brain, have enabled Phrenologists to discriminate thirty-eight, with corresponding primitive mental faculties. Of these, the evidence amounts to various degrees of certainty; two rest upon something more than conjecture, and one possesses an organ of which the function has yet to be ascertained. These organs are classified into three great *genera*, styled respectively, Propensities, Sentiments, and Intellectual Faculties. The two former are called Feelings, the latter what their name implies. A Propensity is defined an internal impulse or tendency, inviting to certain actions. A sentiment is said to differ from the former, in not merely being characterised by the possession of a peculiar tendency, but in experiencing a superadded emotion. Acquisitiveness is instanced as an example of a propensity giving simply a tendency to acquire. Veneration, as a sentiment which produces an impulse to worship, and which also creates a particular emotion of respect or reverence, called a sentiment. This definition by Spurzheim, appears to be a distinction without a difference, or rather, to be untrue in point of fact. It is as legitimate to speak of the emotion of Love, as of that of Benevolence or Veneration. The Intellectual Faculties embracing the second Order and third Genus of Organs, are those which give mankind a knowledge of all objects, their relations, qualities, dependencies, nature, and powers.

ORDER I.—*Feelings.*

GENUS I.—*Propensities common to Man and the Lower Animals.*

- | | |
|--------------------------|----------------------|
| No. 1. Amativeness. | 7. Secretiveness. |
| 2. Philoprogenitiveness. | 8. Acquisitiveness. |
| 3. Concentrativeness. | 9. Constructiveness. |
| 4. Adhesiveness. | Alimentiveness. |
| 5. Combativeness. | Vitativeness. |
| 6. Destructiveness. | |

The two last are not numbered, not yet being sufficiently investigated.

GENUS II.—*The Sentiments common to Man with the Lower Animals, are usually reckoned three in Number :*

- | | |
|--------------------------|-------------------|
| No. 10. Self-Esteem. | 12. Cautiousness. |
| 11. Love of Approbation. | |

To this class others perhaps should be added, by a subtraction from the next, or

GENUS III.—*Superior Sentiments proper to Man.*

- | | |
|------------------------|--------------------------------|
| No. 13. Benevolence. | 19. Ideality. |
| 14. Veneration. | 20. Wit or Mirthfulness. |
| 15. Firmness. | 21. Imitation. |
| 16. Conscientiousness. | Love of the Sublime, or of the |
| 17. Hope. | Past. |
| 18. Wonder. | |

Of this number, Firmness, Wonder, and Imitation, *at least*, are manifested in no mean degree by the lower animals, and Wit ought to be classed among the Intellectual Faculties. The last organ, placed behind Ideality, and marked by a point of interrogation (?) is not ascertained, but merely conjectured by various Phrenologists, to have different functions.

ORDER II.—*Intellectual Faculties.*

It has become fashionable to place the External Senses in the Order of Intellectual Faculties, but for what good reason it is not easy to discover. They do not form ideas, remember, compare, judge, or reason. They have no emotions, tendencies, or impulses. They are nerves merely, with a mechanical apparatus, not cerebral organs. Indeed, it has been found that there are separate and independent organs in the brain, of Alimentiveness to perceive Tastes, and of Size, Weight, Form, and Colour, to receive the impressions of the organs of sight. Reasoning from analogy, Touch and Smell must also possess cerebral organs, independent of the nerves of the senses, so that the functions attributed to the latter are monopolised, and their reputed occupation gone. They are, no doubt, the instruments whereby the state of the external world is conveyed to the mind; but in so far as thought is concerned, it would be about as proper to call a pair of spectacles, or an ear trumpet, organs of intellect, because they are instruments whereby sight and hearing are rendered more acute. Intellectual Faculties cannot be mended by the optician or tinsmith, although it is certain that bad hearing or eyesight can be cobbled by the services of such persons. It is indeed true, that a notion of the external world could not be obtained without the presence of the senses, as spontaneous and internal emotions cannot be produced without a due circulation of blood through the brain; or violent rage, without an excessive flow of this liquid to the organ of Destructiveness; or, indeed, the action of the optic or auditory nerves, without the stimulus received through the blood-vessels. But we do not call the heart an Intellectual Faculty, because it excites other organs to feel or to think. The Senses are the terminations of the instruments whereby we derive ideas of externality; they are simply an atmosphere through which the world is perceived by the mind. They are the altars on which the sacrifice is laid—not the god who is propitiated. Many phenomena prove this. In our dreams, when every external sense is dormant, our eyes shut, our mouth closed, our bodies at rest, we are conscious that we see, and hear, and taste, and move, and struggle, having exactly the same consciousness of impressions, identical with those which are made on our senses when we are awake. It is clearly some-

thing else, therefore, that sees and hears, than the eye or the ear. When we are awake, and engaged in study, we do not hear the ordinary sounds of the busy hum of life. The watchman calls the time unheard, and we are unconscious of his measured tread, as assiduous in his rounds his heavy footsteps echo through the deserted streets, and die away as he hastens to the silent station, crowded through the day as the thoroughfare of an anxious and self-seeking population. The clock strikes the latest hour—the keystone of the arch of night—with garrulous and officious punctuality, but it reaches not our consciousness; while we yet know, by the most accurate investigations of science, that these sounds have made as distinct, powerful, and certain impressions upon the auditory nerve, as they ever did when we were least abstracted, and most alive to external impressions. If we look on the retina of a somnambulist's orbits, as he stalks forth, like a Lazarus from his bier, in the garments of the grave, staring forward, abstracted, and asleep, we can see that the image of all external objects is reflected on his pupils, as accurately as on those of the most observant, although we may perceive that there is no speculation in those eyes which glare so. The senses then give us no more idea of straightness, or roundness, or hardness, or softness, than as instruments. They act in a capacity different from, but no higher than, the round ball, or the square table, or the hard stone, or the soft down.

GENUS I.—*Intellectual Faculties which perceive Existence and Physical Qualities.*

The primary Perceptive Organs are those which perceive the *Existence and Physical Qualities* of external objects. They are generally classed thus:

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|--------------------|----------------|
| 22. Individuality. | 25. Weight. |
| 23. Form. | 26. Colouring. |
| 24. Size. | |

Of these it will remain for consideration, whether No. 22, Individuality, ought not to be classed under the order of the Faculties of Relative Perception.

GENUS II.—*The Intellectual Faculties which perceive the Relations of External Objects are,—*

- | | |
|---------------|------------|
| 27. Locality. | 29. Order. |
| 28. Number. | |

There are certain phenomena connected in the mind by other relations than mere physical properties, and which may be called Associating Qualities. These are,—

- | | |
|------------------|---------------|
| 30. Eventuality. | 32. Tune. |
| 31. Time. | 33. Language. |

GENUS III.—*Reflecting Faculties.*

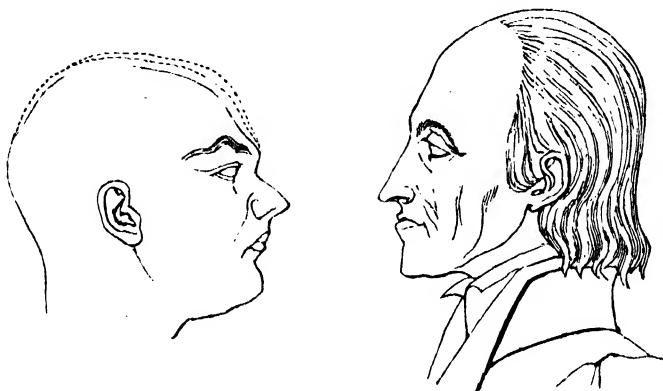
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|-----------------|----------------|
| 34. Comparison. | 35. Causality. |
|-----------------|----------------|

SECTION III.—*The great Divisions of the Organs into Animal, Moral, and Intellectual.*

FROM this description it will be seen, that the Propensities are all situated in contiguity with each other, at the back part of the head, and round the sides of the base of the brain. The Sentiments are likewise in the vicinity of each other, on the coronal surface, or crown of the head; and the Intellectual Faculties are also segregated and confined to the front part of the brain, the anterior lobe, or forehead. From this cerebral disposition of contiguity in the organs of each class of faculties, it will be seen, that the general character of an individual, as a moral and intellectual, or a merely instinctive or animal being, may be easily ascertained, and must depend upon the proportion in which these orders are developed in the brain. If the posterior lobe, for example, be developed in a degree relatively much larger than the anterior, the dispositions will of course partake much more of an animal than of an intellectual nature. Should the coronal surface be large, in proportion to the posterior, anterior, and basilar regions, the tendency will be more towards morality and religion than to the solicitations of the passions, or to reflection; and should the

posterior and basilar regions be deficient, in comparison to the coronal and anterior surfaces, the result will of course be a prevalent sentimental and intellectual over the merely animal nature. Where all these are in the same proportions, and equally stimulated, there will be found the most perfect character, although, of course, just on that account the least marked or determinate, and the most entirely on the verge of, and liable to, running into one or other of the marked descriptions. If the basilar and posterior regions be larger, to a very great extent, than the anterior and coronal, sensuality and crime will be the result.

What an extraordinary contrast of cranial conformation is presented, for instance, betwixt these two heads!

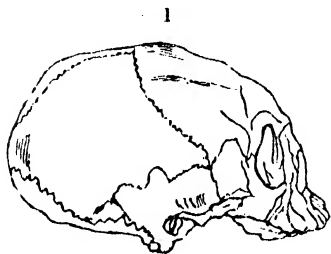


The first, from the collection of Vimont, is that of a monster in human shape, guillotined at Paris, for the murder of his own father, the last of a series of revolting crimes. The second, is the noble form of Francis Oberlin, pastor of five villages in the Voguesian mountains—a man round whom a celestial moral atmosphere hovered, like a glory on the head of an Evangelist—emphatically a “peace-maker,” and of his race

“The greatest, wisest, most discreetest, best.”

Nor are *intellectual* antitheses less striking. A glance will convince the least discriminating eye of the cerebral differences betwixt the skull of a Charib (No. 1), a

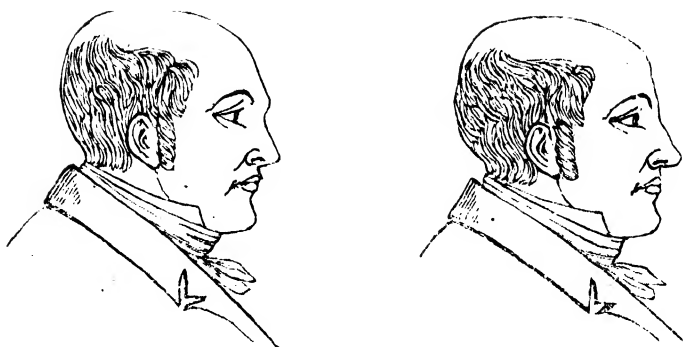
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member of a tribe of the lowest and wildest order of savage ferocity; and of Victor Hugo (No. 2), the greatest of modern French writers of fiction.

The size of organs depends on two conditions, length and breadth. An organ may, for the sake of illustration, be likened to a cone, of which the apex, or pointed end, originates in the bottom of the medullary, or white matter of the brain, situated about the centre of the head, opposite the hole of the ear, so that a wire passing diametrically from one ear to another, would touch the apex of the cones, of which all the organs may be conceived to consist, and which, as it were, congregate in the centre of the bottom of the brain, midway betwixt the two ears. This cone enlarges gradually in each direction, as it seeks its way to the surface of the brain, and touches the inside of the skull, which forms the resting-place of its base—the cone being imagined to be inverted. The power of an organ, estimated by its fibrile length, depends therefore upon the distance of its base, at the surface of the brain, next the inside of the skull from its apex, situated in the medullary matter opposite the hole of the ear. The power of it, determined by its breadth, depends upon the superficial, or, as it is technically called, peripheral expansion of its base, at the surface of the brain, ascertained by examining the outside of the skull. When this length and superficial expansion are combined, of course the power is greater than if the one existed without the other; so that, although a forehead were ever so broad, if the distance from its surface to the hole of the ear were little, the power of the organ would be much diminished. Besides this rule of estimation, however, there is another which will much facilitate and correct calculations of the power of the greater subdivisions of the brain.

The anterior lobe is the depository of the Intellectual Faculties. It occupies all the cerebral mass from the organ of Constructiveness (No. 9), forward, and from the base of the brain to the organ of Comparison (34), upward. By a reference to the diagram of the side view of the brain, the frontal lobe will be seen to be indicated by the mass in front of that part, where, at the base, it goes suddenly up, and becomes less deep than the middle lobe. The quantity of brain in front of these points, indicates the length of the anterior region. The *relative* length of the organs of the Intellect, will, of course, be detected by their respective superficial protrusion. The extent of the breadth and height of the forehead proper, or, in other words, the amount of the superficial expansion, indicating the character of the base of the cone, and showing a greater amount of cerebral matter, also forms one measure of the organic power. From this it will be perceived, that a broad, or even a high forehead, will not alone be evidence of great intellectual capacity. If the anterior lobe be shallow, that is, if the extension of the brain forwards, from the organ of Constructiveness, be very short, the organs will be deficient in length, and consequently in power. Neither will a forehead, which is somewhat narrow, be necessarily indicative of great intellectual deficiency. If the anterior lobe be very long, there will be a proportionate increase of power, to balance the inferiority of superficial expansion. The common notions also which are entertained as to the appearance of what is called a retreating forehead, are to be studiously corrected by this rule. The Knowing Faculties, as they are called, are situated at the base of the forehead, immediately over the nose and eyes. The Reflecting Faculties are placed at the top of the forehead proper, immediately below Benevolence, or upper surface of the anterior lobe. Should the Perceptive Faculties be very largely developed, and the Reflective in a considerable absolute, but inferior relative, degree, of course the base of the forehead will protrude much beyond the upper part, and thus give the brow a retreating appearance, when, in point of fact, it ought more properly to be said that the former projects. Were the Knowing organs smaller, they would, of course, not project; the forehead would not appear to retreat, but would assume a more perpendicular appearance, while the amount of intellect would be absolutely less. Thus, in the two profiles here given, of the same individual, that which represents a retreating forehead (No. 1), actually indicates a better intellect than the other (No. 2), because there is a greater amount of brain in the anterior lobe.



Although Phrenologists have been in the habit of estimating the amount of cerebral matter in the intellectual region, by the quantity of brain in front of the organ of Constructiveness, a more unfailing index in practice is the quantity in front of the corner, or bony angle, at the outer edge of the eye-brow, which is easily distinguishable. We have found, that when the brain is shallow in front of this point, the intellect is in a corresponding degree defective, however fine the front view may be. There is always less intensity, activity, and energy, with a corresponding want of what may be called *reflecting perspective*, or that quality of mind which manifests a lengthened and far-seeing view of any one subject. In an infant's skull, the forehead in general appears fine; but on applying this test to it, the quantity of brain in front of this corner is very shallow indeed. In men of a brilliant intellect, on the contrary, the brain presents great depth at this part.

The coronal surface is that portion of the brain which is assigned to the organs of the moral and other sentiments. They cover the whole superficies of the top of the head. The points at which they exhibit their size, commence in front at the organ of Causality, at the top of the anterior lobe, and behind at the organ of Cautiousness. The height of brain above these organs, indicates the depth of the cineritious, or thinking matter of the organs of sentiment, and forms, therefore, the principal rule of estimating their power. The organs of Veneration and Hope, situated in the centre of the coronal surface, may also be estimated by their height above the cornered bony ridge, which runs along the top of each side of the head. The height is sometimes very small at this portion of the skull, even where the front and back parts of the coronal surface are high, and there appears to be no sensible sinking at the organs of Veneration and Hope, along the top of the head. Superficial or peripheral expansion, indicates, to a certain extent, the size of the base of the cone of each organ, and, as in the case of the Intellect, is an element in the estimation of power in the Moral region also. The coronal surface is sometimes high above Causality and Cautiousness, while, at the same time, the coronal surface is narrow across, and very short when measured from the organ of Firmness the posterior, to Benevolence the anterior organ of the coronal region and moral sentiments. Of course, all these circumstances must be carefully included in every estimate of the size of an organ.

Besides these general divisions of the organs, there are others which seem to have a real existence in nature. The pure system of induction whereby Phrenology was discovered, precludes all idea of theory or hypothesis in the discoverers. Gall found out first an organ of perception in the front, then one of instinct in the rear, afterwards a moral sentiment on the top; so that, by this detached, fitful, chance-medley mode of discovery, he proved that he had no regular or designed theory of grouping the organs; but, on the contrary, chose their place and situation exactly in the order of the series of their discovery. The arrangement being, therefore, incontestibly made without design, and in the absence of hypothesis, while Gall was ignorant of the effect of the mutual stimulus of the faculties, and of the fact afterwards discovered, that the activity of one group of organs, abstracted the sanguiferous

stimulus from the rest, and left them in a state of consequent inactivity, it is in our mind one of the very strongest psychological and physiological proofs of the truth of his system, that by this undesigned mode of discovery, it has so turned out that those organs which bear a more peculiar mutual relation than the rest, are accidentally found to be placed beside each other. Thus, how beautiful is it to find, that *Amativeness*, which is given to the sexes that they may love each other, ay, even unto death, whereby, with a mutual and exalted heroism, the husband and the wife centre so their souls in each other, that they would willingly lay down their lives that so the apple of their eye might be saved—how beautiful is it to find, that that organ is immediately surmounted by, and from its own action directly stimulates, *Philoprogenitiveness*, that instinct, whereby they love above all else but each other, the tender pledges of their mutual affection, the offspring of that very love so devoted and so enthusiastic! how admirable, too, is it to observe, that when *Philoprogenitiveness* is stimulated, it is surmounted by, and excites, the organ of *Concentrativeness*, the instinct whereby the state of marriage is produced, and fidelity to the marriage vows is not left to the care of a cold sense of duty, but to a pleasurable instinct stronger and more fervent! On each side, too, it stimulates the organ of *Combateness*, whereby the timidity of the woman vanishes before danger which threatens her offspring; and the cowardly hen, which, at all other times flies before the least threat of danger, is animated, as if by a miracle, to withstand and attack all who dare but approach her brood. Lest the regards of the domestic hearth should too exclusively engross the affections, or devotion to the young sacrifice attention to the rest, *Concentrativeness* and *Philoprogenitiveness* stimulate the neighbouring organs of *Adhesiveness*, and the patriarchal state gives rise to the social, so as to combine the duties of the parent with those of the friend and citizen. That no defect may exist in the discharge of this latter office, the organ which affects society is surmounted by *Love of Approbation*, which animates us to desire the good opinion of our fellow men, and to practise all those external amenities which render social life agreeable, and that *Self-Denial* and *Love of Glory*, which, in the solicitude to stand well with the community, incites us to those acts which best promote its interest. But lest in our care for others, we should forget our own welfare, *Love of Approbation* and *Adhesiveness* stimulate the neighbouring organ of *Self-Esteem*, leading us to put a proper value on ourselves and our own interest, checked by our anxiety for the good opinion of others, and checking it when it leads to improper self-sacrifice. But the *Love of Fame* leads to rashness, and its organ, therefore, stimulates the organ of *circumspection* and *foresight*; that fear which would despair, did not its very action stimulate the neighbouring organ of *Hope*—*Hope* that would brighten the prospect into a hue too sanguine, did not its action react upon and stimulate *Cautiousness* to beget a temperate judgment. That which often commences with mere fear of consequences, ends with a desire to discharge our trust from a sense of duty. The terror which the evil effects of our offences on our happiness is to produce, often incites us to repentance and newness of life; and thus stimulated, *Cautiousness* results in the activity of its adjoining organ, *Conscientiousness*; and then, when we have proved all things, and have resolved to hold fast that which is good, *Conscientiousness*, which animates us to form the resolution, stimulates the organ which enables us to keep it, and *Firmness* completes what *Conscientiousness* began. •

• The tiger, which has slept in his den for a long period after a surfeit, awakens, and *Alimentiveness* is hungry. His cubs are also around him clamouring for food, and *Philoprogenitiveness* hears with pity their deep but plaintive cries. What, if next to these organs were placed those of *Cautiousness* and *Benevolence*? Palsied with fear, and overcome with universal love, how would he have the courage to attack the deer, and the cruel heart to kill him, as, within his sight, the big tears

“Course each other down his innocent nose”?

Nature has provided a better plan. *Alimentiveness* is placed immediately next to *Destructiveness*, which its action highly stimulates. *Combateness* is roused by its neighbours, *Destructiveness* on the one side, and *Philoprogenitiveness* on the other; and thus *Alimentiveness* and *Philoprogenitiveness* are supplied with the very weapons which minister to their wants. Had any of these organs been placed betwixt those of *Causality* and *Comparison*, whenever we began to reason, we would begin to murder, to fight, or to be hungry; and thus the intellect would for ever be clouded

by passion. Nature, then, has made subdivided groups of organs clustered together, and Dr. Abram Cox has advanced a considerable way in estimating their relative size. The Animal Propensities, situated at each side of the head, he estimates by an ideal line perforating the external angle of the zygomatic arch, or of Causality in front, and proceeding straight backward to the outer angle of the trapezius muscle at the back of the neck. The amount of brain outside of these lines, indicates the relative size of the Animal Propensities there situated. To estimate the size of the organs at the back of the head, with the exception of Amativeness, he proposes a similar line inserted at the posterior angle of the organ of Cautiousness, and penetrating straight through to the centre of the spinous process of the occipital bone. All that lies beyond the posterior position of this line, is the protuberance of the organs. This, however, does not provide for the estimate of the breadth of the convolutions. There are certain organs which lie at the base of the brain, and which project downward as well as outward. Their downward projection, Mr. Cox, and also Mr. Combe, have found, by experience, to be accurately estimated by running an imaginary line from the outer edge of the superciliary ridge, straight through to the occipital spine. The distance of the hole of the ear below this line, will indicate the degree of projection of these organs downwards.

With regard to the estimate of the size of particular organs, it is to be observed, that where all the organs immediately adjoining each other, are of the same size, there will be a general smooth roundness of the surface, and an absence of any superficial irregularity. When an organ in the centre of others appears depressed, it does not necessarily follow, that it is absolutely deficient or small. Thus, for example, if the organs of Philoprogenitiveness, Adhesiveness, and Self-Esteem, be very large, they will, of course, project accordingly. The organ of Concentrativeness, which is situated between them, if it be *very* large also, will, of course, have no hollow in the surface; but if it be only *large*, or *rather large*, it is, although absolutely considerable, relatively to the surrounding organs not so, and, therefore, there will be at that region a depression. Of course, if the hollow be *very* great, there will not only be a relative but an absolute deficiency.

CHAPTER VI.

PROPENSITIES.—DO THEY POSSESS MEMORY?

WE shall now proceed to consider the general mental Faculties, and their corresponding cerebral organs.

ORDER I.—*Feelings.* GENUS I.—*Propensities.*

We commence with the propensities, which are all common to man, with the lower animals. They do not in themselves form ideas, but simply produce a tendency and corresponding emotions of a specific nature. In our opinion, they possess also no memory. As this is a doctrine not generally recognised by Phrenologists, it may be worth while to consider shortly the grounds upon which this conclusion is founded.

1. No propensity, sentiment, passion, or emotion, exists to our consciousness, by its own innate activity, or without the intervention of the perceptive, or, what are called, reflective faculties. The cerebral mass, of which an organ is composed, may be in a state of action, without our being conscious of it; but consciousness of emotions is the result solely of the relation of the activity of the organs of Sentiment or Propensity, in conjunction with that of some of the Intellectual organs. Thus, for example, we cannot love in the abstract. No man ever felt the tender influence of this emotion as a feeling, independent of any related object. It is the Perceptive Faculties, which, relating the passion to its subject, first make the state of mind, or emotion, present to our consciousness. Thus, has Shakspeare said—

“Young men's love then lies,
Not truly in their hearts but in their eyes.”

So of anger, and of all the other states of the various passions and emotions. They

are mere susceptibilities; it is the presentation of their related objects which superinduces their state of conscious activity. The more powerful the organ, the more active the faculty, and the more easily and variously will objects excite it to emotion and gratification. But without object there is no action. A man may possess so large an endowment of the organ of Combativeness, that, as the phrase goes, he would fight with his own shadow; but his perceptive faculties must present to this organ his shadow, before he can incline to fight. Some persons are said to be so testy, that they are angry at nothing; but this is a mere mode of speech to signify that they are irritated with some insignificant object, which would not excite men of a less destructive temper. No man ever experienced an active state of this organ, without the prior intervention of some object to present the emotion to his consciousness.* If, indeed, we analyse terms, we will find that this must be, and is the case. Love, Anger, Benevolence, Veneration, are mere abstract terms, derived from a classification of individual phenomena which resemble each other; so that our ideas of propensities or sentiments are not originally derived from the faculties or organs themselves, but from a perception of resemblance betwixt particular manifestations of emotion or passion. It is our observation of individual acts that enables us, then, to rise to abstract terms; and therefore, in their abstract state, we never detect passion, but only see it in its state of eventual and contingent activity. Thus, when we say that an individual is passionate, all that we mean is, that we have seen or known him often angry. In all these cases, we will find that some *object* has produced the passion—that might not in our eyes have been adequate to warrant rage; while, nevertheless, we never contemplate the possibility of seeing him in anger without some subject to excite it. So completely is this the case, that whenever we are aware that he has had some object which has justly caused him to be exceedingly angry, we know that he has then a much greater susceptibility of passion than before, and therefore, to subdue it, we know that all that has to be done is, to keep from him any *object* which is likely to excite his anger anew. If he continue angry, we at once say, that he has not yet forgotten the object which formerly agitated him;—

“Forget! forgive!
I must indeed forget, when I forgive.”

2. Whenever we have forgotten the object which excited any particular passion, the passion itself no longer exists to our consciousness; and if we wish to revive it, we instinctively adopt, as the means of accomplishing the desire, the plan of recalling all the objects and facts wherewith it was originally connected. This is the only means. Destroy the memory of the form, face, eyes, voice, expression, actions, of a being we once loved, and the emotion of affection itself remains perfectly dormant.

3. But it has been contended, that we can recall our emotions, as much, and as distinctly, as we can recall objects or ideas. If we have no consciousness of passion, but such as has always been preceded by the perception of its related objects, that is to say, if objects are uniformly the antecedent, and therefore the cause of emotion, emotion never can exist without their antecedence. If they must coexist in the relation of antecedence and consequence, then the emotion never can be recalled, except when preceded by the revocation of the objects. If the objects originally were the direct cause of the excitement of the emotion, then, the presentation of the objects of new, by recollecting them, must excite the passion, without the necessity of recalling the recollection of the former excitement, by the simple operation of present cause and effect. And if it be the necessary result of the presentation of related

* “A singular instance,” says Dr. Millingen, “of forgetfulness, is related of a lady, who had been united to a man whom she loved, after much opposition on the part of her family, and who lost her memory after the birth of a child. She could not be made to recollect any circumstance that occurred since her marriage, nor could she recognise her husband or her infant, both of whom she maintained were utter strangers to her. At first she repulsed them with apparent horror, but was at last, by the entreaties of her family, induced to believe that she was a wife and a mother; and, although she yielded to their solicitations, yet, for years, she could not persuade herself that their assertions were correct, as she actually was convinced “against her will.” “In this instance,” remarks the Doctor, “disease not only destroyed memory but affection. Blind persons, who had once sight, gradually lose all visual impressions, and never dream of seeing; so deaf people also never dream of speaking, except on their fingers.”

objects, to excite the connected passion, then the result of a power of remembering an emotion would be the consciousness of the simultaneous action of two feelings—the reproduction of the former one, and the production of a new excitement of the passion by the recalling of its antecedent object. As we are conscious of no such double emotion, and as the feeling never exists without being antecedent by the object which excited it before, the revocation of the emotion is incapable of proof, because we never can have evidence that the existence of the feeling is not the result of the presentation anew of the object which formerly excited it. We know also, that we can recall the object without recalling the emotion; but that we never can reproduce the emotion, without the antecedent reproduction of the object. This is well illustrated by the phenomena of dreaming. A gentleman could dream of travelling in a stage-coach, by simply exposing his limbs to the cold. He fell asleep with his legs uncovered, but when dormant had no consciousness of the cold. But the exposure excited his perceptive faculties; they produced a dream of travelling in a stage-coach, and whenever the objects with which were connected the sensation of cold were presented to his consciousness, he immediately experienced cold itself, but not before. So, if a book or board fall in the room where we sleep, we have no consciousness of the noise, until we dream of some incident wherein the noise is introduced as a part of the story. So, if we have eaten of a salt diet, we dream of some circumstances in which we introduce the drinking of water; we never merely find ourselves thirsty. So, if we be of a Sanguine temper, we never experience the delights of Hope in the abstract. That organ stimulates the perceptive faculties to build castles in the air, which at once gratify Hope, and make its emotions present to our consciousness. When Garrick played Lear, he did not produce the impassioned emotions of the character directly. He first recalled to his recollection vividly the picture of a man whom he had seen dandling his child at a window, and who let it fall, whereby it was killed; he then became mad. The recalling of the perceptions reproduced the emotions. So, all actors, in order to feel, must first conceive, and imitate what they have seen. Hence, imitation is absolutely necessary to them.

The reader must be warned to distinguish betwixt the reproduction of a feeling as a fact, and as an emotion. We may easily recollect that we were angry, or in love, or afraid, as a matter of fact, without remembering these emotions themselves. To do the latter, we must be again angry, amorous, or terrified; and our own consciousness will easily tell us, that in this latter case we can again feel none of these emotions, without also previously vividly conceiving the form, the objects, the events which originally produced them.

We shall not at present farther detain the reader with illustrations of this position. We shall merely remark, that it derives additional force from the moral consequences which are deducible from it. If no passion can by itself be present to our consciousness, or can be reproduced, except as dependent upon external objects, and subsequent to their presentation, either actually or as objects of recollection, we can see how passion is under the control of the intellect and the regulation of the will. Let us withdraw ourselves from those objects which excite the passions, and we see that the passions themselves cannot act; let us banish from our minds the recollection of the necessarily antecedent objects, and the consequent emotions must lie dormant. Remember, that where there is no object there is no emotion. Object is the arrow, which, nursed in the eagle's breast, makes the emotion incurable. We have all the power to pluck it out, and thus we may each become our own physician. Let the young and the beautiful tear from her breast the locket which she keeps as the last gift of him who was unworthy of her; it is an object which suggests his image, and on his image alone hangs her love. Let the new made widow, after the days of decent grief, cease to tear aside the curtain that veils her husband's portrait, the sight of which makes her wounded heart bleed afresh, and bids her neglect life and children. When his form grows dim and inarticulate to her sight, she will return to her duties. The father has lost his family, and sinks into manly grief, but at last into unmanly despair. So long as

“He cannot but remember such things were,”

the emotions must arise which made him feel they “were most dear to him.” As he remembers less that they were, they will become less painfully dear. It is

thus, that by filling the mind with new objects, we forget old sorrows; it is thus, that by visiting new scenes, we are gradually cured of a dangerous *nostalgia*. The Swiss only became melancholy by hearing the *Rans des vaches*—the air that presented their mountains—the mountains that recalled their homes—the homes that presented its hearts—those hearts, which beating made theirs beat—those eyes, which glistening, or tearful, made their bosoms heave, and their orbits to burn more than the seas drown.

CHAPTER VII.

DOMESTIC GROUP OF FEELINGS.

SECTION I.—*Organ I. Amativeness.*

THE first of the propensities is AMATIVENESS. It occupies the whole of the cerebellum or little brain, at least there is no other mental organ which inhabits that region. The cerebral mass of which the organ is composed, is greater than that of any four or five of the other faculties. We have already indicated the appearance and situation of the cerebellum. The size of this organ depends upon the quantity of cerebral matter which exists at the posterior part of the base of the brain, immediately below the insertion of what is termed the occipital bone, at the root of the neck. The line of its situation is all the brain below the organ of Philoprogenitiveness, as indicated on the bust. That, and other organs, are carefully to be distinguished from the mastoid process, a bony excrescence immediately behind each ear. The size of Amativeness is generally indicated by the thickness and breadth of the back part of the neck, immediately below the occipital bone. The test of the true size of the organ, and the consequent native power of the faculty, is the circumference of the brain from the back of the one ear to that of the other. A convenient method of measuring it, is to place the heel of the hand at the back of one ear, and to examine the distance from the longest finger to the back of the opposite ear. Of course, the hand must run *below the occipital bone*. We do not know that there is any other test by which the real quantity of brain contained in the organ can be properly measured. The neck may be narrow, and this would deceive an unpractised manipulator into the idea that the developement of the organ is deficient; but still, the projection of the brain backward, from ear to ear, may be considerable, although it be less laterally, and then the developement will be in a corresponding degree. The neck may also be broad, but very shallow, and deficient in the contents of the circumference. In such a case, it is necessary, of course, to make a corresponding deduction. Thus, for example, in the bust of the Rev. Mr. Martin, it appears to be of greater breadth than in that of David Haggart; but if the test which we have just mentioned be applied, it will be perceived that the latter is endowed with the organ in a much larger proportion than the former.

This organ is that which, between the different sexes of all animals, produces the sentiment of what is emphatically called *love*.

It is never manifested in infancy, and very seldom in childhood. Indeed, it almost never appears until these epochs are past; in some latitudes, earlier; in others, later. In this country, the law recognises a particular period for its developement, 12 years of age in females, and 14 in males. Accordingly, it is now admitted by all anatomists of any modern eminence, who have studied the subject for themselves, that the cerebellum, the organ of this propensity, bears a proportion to the brain proper of *one to twelve or thirteen*, in infants or children; while in adults it is as one to only six, or fully double in the relative proportion to what it is before puberty. That it occupies a space equal to the aggregate average of six other organs, is a corroboration of the fact that it is the organ of this faculty. The poet has said, *amor vincit omnia*; and there can be no doubt that it is the most powerful and universal of the feelings, making, as it has been said, fools of wise men, and wise men of the foolish. Its singular feebleness in infancy corresponds exactly with the extreme smallness and tenuity of the neck at this place in children. Some, however, have manifested

this passion very early. In warm climates especially, this is the case; and even in northern Europe, love has entered the breast so early as five, and even three years of age. In these cases, the cerebellum is uniformly large.

In the females of all animals, man included, it is well known, that, as a general rule, this passion is weaker than in the other sex. Man woos, and woman has to be won. In the lower creation, while it is *occasionally* experienced by the one sex, it constantly prevails in the other. The most superficial observer cannot fail to have remarked the great difference in the size of the neck, betwixt the males and females of the horse, cow, cat, deer, and lion species, for example. While this is illustrated in the busts of human beings also, there are exceptions in development and manifestation.

In old age, as in childhood, this passion in general becomes feeble, and the development perceptibly diminishes.

The antlers of the stag are nourished by blood-vessels, which proceed from this organ. When they have attained their full annual growth, the integuments and blood-vessels are rubbed off: The blood, which formerly was exhausted in supplying the antlers with nourishment, now getting no vent, irritates and stimulates the organ, and then, and ~~not~~ before, the animal manifests the feeling of attachment to the doe. In the elephant, a sort of pitchy gum exudes from an orifice at the top of this organ. At the pairing season this gum ceases to flow.

There are many recognitions of the correspondence betwixt the size of the cerebellum and the power of this feeling, to be found in history. Appolonius, in his account of the expedition of the Argonauts, describes Medea, after the departure of Jason, as reclining sleepless on her couch, inconsolable at the loss of her lover; and at Book III. line 761, the poet proceeds—"The fire which devours her, fastens on all her nerves, and makes itself felt *even at the back of her head, in that place where pain is most keenly felt, when violent love takes possession of all the senses.*" Hippocrates says of the Scythians—"When they find themselves sick, they open a vein behind each ear; when the blood has flowed from it, they find themselves overtaken with weakness, and fall asleep; upon awaking, some of them think themselves refreshed; but this is not the case invariably. For my part, I think the cure worse than the disease; for it is the veins behind the ears, the bleeding at which destroys every feeling of love; and it is these veins which they cut. The consequence is, that, on recovery, they manifest a total indifference to their wives." Suetonius, in narrating the vicious debauchery of Nero, says, *fuit cervix obesa*. "His passions were painted in his face; he had small eyes surrounded with fat, *a gross and thick neck*, a protruding stomach, and feeble limbs." Claudius, whom he characterises as equally sensual, is noticed as *opimis cervicibus*. Musæus, in describing the portrait of the monster Vitellius, exclaims—"Thou thick-necked Vitellius!" Willis, mentioning the portrait of the infamous and lascivious Olivia Wadachini, sister-in-law of Pope Innocent X. describes her as "a handsome woman, with that *round fulness in the throat and neck*, which, whether it existed in the originals, or is a part of a painter's ideal of women of that description, is universal in portraits of that character."

In our remarks on the subject of the Temperaments, we hazarded the opinion that the various parts of the corporeal system were under the influence of the different organs of the brain, and performed their functions by means of the action of these organs. We also remarked, that, upon the occasion of the excitement of each particular cerebral organ, there was uniformly an appropriate change in the state, either of the muscles, the glands, the circulation, respiration, or viscera. The disagreeable affection of the organ of Hope, deranged the digestive apparatus, and excited vomiting. Its agreeable excitement rendered these organs more healthy and perfect. The disagreeable excitement of Cautiousness produced a marked effect on the secretions, and particularly on those of the skin, reducing also the temperature. It also paralysed the muscles. The depressed action of Concentrativeness and Adhesiveness produced the secretion of tears. The action of Firmness increased the tension of the muscles. We likewise supposed that each organ naturally threw the body into an attitude corresponding to the line of its own direction, and that the action of each organ had its own specific effect upon some one tissue, or system, of the corporeal frame. We are happy to find, from a perusal of the Lectures of Broussais, that we are enabled to adduce his justly great authority in support of our views. "The

propensities," says he, "consist of intra-cranial, and extra-cranial nervous systems, forming sympathetic organs; so that when the nervous systems of the propensities are in a state of action in the brain, the corresponding visceral nervous systems are in a state of sympathetic activity. In like manner, when the visceral nervous systems are excited first, their action produces sympathetic activity in the corresponding cerebral nervous systems. But as the viscera are not multiplied in proportion to the number of the propensities, we cannot say that each instinct has appropriated to it a corresponding nervous system. The propensities, then, it may be said, act upon the viscera generally; one more, another less; but each in a different peculiar manner. Thus, in all the emotions we experience, some are accompanied with some sensation of the heart; others, of the stomach; others, of the lungs, of the intestines, of the liver, and so forth." From analyses of the functions of various organs which we have made, and from others by which M. Broussais has succeeded in tracing them to their ultimate source, we have long been inclined to indulge the opinion, that the primitive function of all the organs is purely physical and corporeal, and that what are called the mental phenomena, are mere results of the physical; their sublimation producing that state of consciousness which is necessary to such a cerebral action as will effect the discharge of the appropriate physical, or corporeal function. Thus, depress greatly the faculty of Hope, and the process of circulation, and consequently, digestion, will be impeded and imperfectly performed. On the other hand, abuse the digestive and circulating organs, and depression of spirits, despair, and suicide, are the consequence. The mental action is a mere result of the sublimation of the corporeal action, part and parcel of it exalted and refined. If a man have no Hope, he will die of imperfect circulation and digestion; if these latter cease, he has no Hope. They are, as it were, the opposite ends of the rod, but connected by continuation. What, then, becomes of all the objections of anti-phrenologists against the proposition, that the cerebellum is the organ of the propensity of Amativeness, founded upon the experiments of Flourens and Magendie, who, upon removing part of the cerebellum in rabbits and pigeons, found that the animals experienced an irresistible tendency to run, walk, or swim backwards, and thence concluded that the function of these parts was to perform muscular movements? It is contended, that as we find in nature one organ does not discharge two functions, and as the cerebellum is here monopolised in the duty of performing muscular evolutions, it cannot be the organ of a mental faculty. But if the consciousness of an emotion be nothing more than the sublimated action and result of the discharge of the corporeal function, there is nothing in this objection. The facts stated by these physiologists, are rather a corroboration of the Phrenological opinion as to the function of the cerebellum. The natural language of this organ is manifested by throwing the head backwards. Epilepsy, which is the frequent result of abuse of the propensity, uniformly throws the head back, and produces violent muscular action. M. Broussais, in the course of his professional practice, found an individual in whom the propensity was in a state of too great activity, who complained of an irresistible tendency to fall backwards. It has been very properly said, that if the cerebellum be the organ of muscular movements, the command over, and power of these, should be greater in persons in whom it was most largely developed. But, says M. Broussais, "*J'ai des preuves très positives, que des hommes à gros cervelet peuvent être extrêmement maladroits.*"

We have already said, that this organ is as large as the aggregate of the average of six others. Its power is, of course, in proportion great, not only in the manifestation of the individual faculty, but also in the effect of the action of such a mass of brain on the rest of the cerebral convolutions. Its fibres originate in what are called the *corpora restiformia* of the cervical tissue, as do those also of the other animal propensities. These fibres likewise pass through the optic *thalami*, and connect this organ with the nerves of sight. The organs of the other propensities are also situated round the cerebellum, and when it is stimulated, partake of the excitement. This anatomical connection of the organ with the nerves of sight will explain the proposition of the poet, that "Love has eyes." It may also account for the blindness which is produced by gross sensuality. Many cases have occurred wherein the right or left hemisphere of the cerebellum alone has diminished greatly in size, and produced blindness in the corresponding eye. "Mankind," says Dr. Gall, "have in all ages been much struck with the singular change which takes place in the whole

character, in the sudden transition which occurs from childhood into youth. The eyes become more brilliant, the looks more expressive, the carriage possesses more confidence, and both sexes, for the first time, experience an inexplicable and infantine melancholy. They find themselves elevated by the sentiment which governs them, above the ideal and what they could have conceived of perfection." "But it has been altogether omitted to consider the brain in connection with this phenomenon, whose different organs acquire at the very same period a great additional development and activity. This is the only reason why the young man and maiden cease to be children, and why the moral and intellectual powers are manifested with so much greater energy."

The effect of this organ is, when large, to stimulate the whole brain to a much greater extent by its intensity of action, than if it were dormant, and consequently, to make the character more determinate and prominent, by producing manifestations of the faculties commensurate with the size and superinduced activity of the organs. Broussais has propounded the doctrine, that the cerebellum in itself performs a mere muscular animal function; and that it produces passion, and the character of the passion, purely by stimulating the brain proper, or the other faculties, to recognise objects which are related to it, and to treat them as these faculties suggest. The activity of this organ, therefore, is the activity of the entire brain. If the development of the faculties be good, it makes the individual better, by bringing his virtues into action; if it be bad, it of course makes his bad passions worse, by an access of intensity.

The organs of Destructiveness, Combativeness, and Secretiveness, immediately adjoin the cerebellum, and where these are large, and the moral sentiments and intellect not in proportion, the inevitable consequence is, an excitement of these by sympathy, without the introduction of any countervailing check. Its connection with Combativeness and Destructiveness is illustrated in the actions of the lower animals. It is most largely developed in the males, and accordingly, if we compare the bull with the ox or cow, the ram with the wedder or ewe, the stag with the doe, the horse with the mare, we see that the former far exceed the latter in ferocity; while, at the season when they choose their mates, they are engaged in interminable battles. This even extends to the objects of their choice, for in their very courtships there is a mimetic war and anger. So, "nippin and scartin's Scotch folk's wooin," has become an adage. Lovers quarrels are as common as love itself. Byron well says—

"Love was the very root of the fond rage
Which blighted their life's bloom."

Abandoned sensual characters are remarkable for their contentious spirit and ungovernable temper. Thus, Mary Macinnes was hanged for murder; and M. Gottfreide, falling in love with two other persons, poisoned her husband, to become the wife of one of them.

Nero, whom Suetonius describes as *cervice obesa*, wished that the Roman people had but one neck, to annihilate them with one blow. It is said, too, that

"Nero fiddled when Rome was burning."

While Caligula was admiring a beautiful lady, he at the same time experienced an irresistible desire to cut off her head. Byron describes the love-sick sultana, as "like a beautiful embodied storm." Indeed, unless there exist countervailing organs of moral sentiments, to which this organ adds new lustre, history tells us, that the effect of its activity is to make the passively bad actively criminal and cruel. It stimulates the organ of Secretiveness, and thus produces an accession of modesty, delicacy, and refinement. When bad principles have undermined this, the Secretiveness which produced modesty excites cunning.

This organ is also in the vicinity of Philoprogenitiveness, Adhesiveness, and Concentrativeness, and, by a wise provision of nature, is framed to stimulate these organs to effect the bond of marriage—to produce social attachment in the spouses; and an abiding love for the pledges of their mutual affection.

Combined in large endowment with powerful moral sentiments and domestic feelings, it becomes a noble, heroic, pure, and elevating passion. It acts, and is reacted upon by those feelings, so as by their mutual agency to exalt and refine the whole heart and to sublimiate the entire character. It inspires a self-devotion and a self-sacrifice—a love of the domestic hearth and the beings that surround it, that stamps the value upon the most sacred relations of life.

This organ, producing an influence on the other sentiments and feelings, exerts a quiet, insensible, unobtrusive effect upon the general intercourse betwixt the sexes in ordinary society, which is the cause of much genuine kindness in their mutual conduct. Before it exists, the rudeness, harshness, and even cruelty of boys towards girls, is subject of easy observation. Dr. Carpenter, in his life of Rammohun Roy, who possessed a large endowment of Amativeness, combined with the utmost elevation and purity of mind, observes, "his enlarged and benignant spirit, the tenderness and purity of his own heart, the maternal love which he had experienced, and the influences of that soothing kindness which he had received from the women of Thibet, when he was separated from the endearments of home, aided, I repeat it, to produce on his mind those sentiments of respect for woman in her domestic, and social, and moral relations, which entirely raised him above the narrow and degrading views entertained of the female sex by his countrymen in general, and which led him to contribute in various ways to the just appreciation of them, and to their protection from the sordid purposes and superstitious zeal of those who degraded them by debasing rites and practices, and condemned them to self-immolation. He regarded woman, whether considered as an intellectual or a spiritual being, as fitted by natural powers and capacities to be the companion, the friend, and the helper of man." He was the principal instrument in procuring the abolition of the burning of widows. Dr. Spurzheim well remarks, that in the lower animals males are kinder to females than to those of their own sex. This is particularly the case with the horse and dog. Fathers are more commonly attached to daughters than to sons, mothers to sons than to daughters. The same remark applies to servants.

A large endowment of this organ is necessary to the poet or painter who treats of subjects of love. Indeed, it produces the sense of personal beauty. Boys and old men have a much smaller appreciation of excellence of form, than those in whom the organ is active. Portrait-painters of small Amativeness do not succeed in female portraits nearly so well as those in whom it is large. It is probable that the variation in the standard of taste on this subject, may arise from the degree of endowment wherein the other faculties are developed. The person of small Amativeness will dislike females of the description mentioned by Milton,

"Heaven in her eye,
In every gesture dignity and love."

It is singular that Milton, whose Self-Esteem was enormous, here speaks of dignity as an essential of beauty. The soft, gentle, confiding damsel, "of spirit so still and quiet, that her motion blushed at herself," may be admired by the man of large Benevolence, Veneration, and Secretiveness, and so forth.

Gall notices a madness caused by this organ, which is well described by Shakespeare:—

"And he, repulsed (a short tale to make),
Fell into a sadness; then into a fast;
Thence to a watch; thence into a weakness;
Thence to a lightness; and by this declension,
Into the madness wherein now he raves."

It also produces furious mania, both in the human species and in the lower creation. The elephant at Exeter 'Change had to be shot on this account.

"By the politeness of Baron Larrey," says Dr. Gall, "I have seen a soldier in whom antipathy to the other sex had degenerated into absolute madness. The very sight of a female threw him into violent convulsions, and drove him into rabid mania. Dr. Spurzheim saw an example of a similar phenomenon in England. In both, the cerebellum was almost wanting altogether." "It has been objected to this," says he, "that the absence of an organ can never produce its opposite. But is the stomach not a case in point? It is not the organ of appetite, and yet is it not true, that a derangement of its functions produces an aversion to all kinds of food?"*

* We do not acquiesce in this reasoning. The food is rejected, not from aversion to it, but simply from inability to digest it. Aversion towards women, is not, in our opinion, produced by small Amativeness, but by the deficiency of that organ producing an absence of inclination for the sex, and a want of any countercheck to the action of antipathetic organs. This is the more evident from some of the cases mentioned by Dr. Gall, wherein persons were married and had children, who declared that they never knew what it was to experience the slightest emotions of love. Did an absence of the organ produce antipathy or mania, such results ought certainly to have occurred in these instances.

Besides the many forms of mania produced by the excessive size and activity of this organ, some are the result of its necessary sympathy with other parts of the system. Physicians are perfectly aware of the many cases of insanity, which result from the maternal state supervening. They are all accompanied by undue excitement of those organs of Secretiveness, Combativeness, Destructiveness, and Alimentiveness, which we have remarked as being excited by this organ. This is manifested by sullen disobedience, the effect of Combativeness; an inclination to injure and even kill those around them; great suspicion, especially relative to the subject of Alimentiveness, that the food is poisoned; and the direction of the Destructiveness is to the neighbouring region of Philoprogenitiveness and Adhesiveness; the hatred being greatest towards husband and children.

When all arguments of a moral kind have failed to induce persons to moderate the exercise of this organ, those of a medical and interested nature may sometimes succeed.

There is no organ which is a more frequent cause of insanity than this—none the excessive indulgence of which is so apt to superinduce idiocy, paralysis, epilepsy, and other nervous diseases, pulmonary and other complaints. Above all, as every man, with an ordinary sense of justice and humanity, is at all events bound to avert the consequences of his own conduct from others, let every one consider this, that the over-action of this organ produces an inevitable hereditary taint, which is of fatal consequence to posterity. It is unquestionable, that if the parent escape the natural results of his own vicious habits, he, at all events, imparts to his children an undue susceptibility of activity in this organ, and produces profligate sons; while upon his daughters, whose excellent education has saved them perhaps from dishonour, he has entailed much unhappiness, and produced death. Sometimes the result in these hereditary cases is epilepsy, or a recurrence so frequent of hysteria, as to produce the most fatal consequences. It is the duty of every man who has the happiness of his species at heart, to awaken his fellow-subjects to the knowledge of the fact, to implore them to investigate, and when they have done so, religiously to act upon the result which that investigation indicates. Many who have studied Phrenology, have regretted that they did not commence the inquiry more early in the history of their lives.

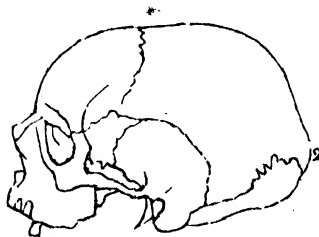
It has been imagined that nobody makes so good a husband as the reformed rake. It is certain, however, that he makes the *very worst father*. His sons emulate his example by a necessary inherent uncontrollable proclivity, perhaps long but vainly resisted by powerful moral sentiments, acting against a spinal and visceral apparatus, hereditarily tainted with a liability to inflamed action, and to counter-irritation of the cerebellum. His daughters have before their eyes the fear of the world, the sense of virtue, and the support of religion. But they suffer, struggle, die of consumption, make an imprudent marriage, or break through the rules of society, and are ruined. We have watched many examples of this. We say, therefore, to every woman, never marry a rake. Let him be the most handsome, the richest, the most elegant, and the pleasantest of men, he is a bad bargain even with a coronet on his head, and a county in his rent-roll. After all, peace in the married state is only to be found in virtuous and healthy children; and if a wife would have exemplary sons, and happy, prudent, and heart-pure daughters, let her never look for this in the offspring of that man, whose life, at the time when the mind, brain, and constitution are being formed, has been passed in the profligate debaucheries of modern society. Until women remember when they are asked in marriage, that they are not only to become *wives* but *mothers*, that a poor, plain, sober, and virtuous man, possesses gifts which must produce far greater future happiness than all the wealth and rank of Cræsus without these qualities, and that domestic felicity is to be found at the *fireside*, not in the carriage or ball-room, society will never advance in the direction best calculated to secure its ultimate improvement.

In the following portrait of a Roman gladiator, the Moral Sentiments are in small relative endowment to the Propensities, particularly Amativeness, which extends greatly from the hole of the ear backward, and Combativeness, which is developed directly upward from Amativeness. It strongly contrasts in both these respects, and in the size of the Moral region, with the profile beside it, which is that of the gentle and harmless De Schlabbendorf, who could hardly form a conception of what sensuality or strife could be, but by observation of other men's character and conduct.



SECTION II.—*Organ II. Philoprogenitiveness.*

PHILOPROGENITIVENESS is situated in the middle of the base of the back part of the brain proper, immediately above the junction of the two organs of Amativeness; and it is easily found, being developed directly above the small nob at the base of the back part of the head, called the occipital bone. If the organ project beyond this spinous process, it is an evidence of a fair endowment of this faculty; but, from this bone often projecting considerably, the parallelism of the organ with it is not an invariable evidence of its being deficient. Its size must therefore be judged of by the general fulness and protrusion of the brain immediately above the occipital bone. Where it is large, there will be found a distinct prominence of the skull, rounded and marked out, so as to be very apparent on manipulation. In this, as in all the other organs, extent of surface is to be particularly attended to, in estimating the power of manifestation. This may consist either in breadth laterally and horizontally, or in length upwards from the occipital bone. Narrowness of shape, even where there is considerable protrusion, must be deducted from the estimate of size. In general, the principal projection is just over the occipital bone; but it sometimes does not extend outwards, until above that point perhaps half an inch. In the cranium here sketched, of a female remarkable for the manifestation of the propensity which produces love of young or of offspring, the organ is very large.



It is more considerably developed in the female head, both of the human species and of the lower animals, than in the male; in conformity with a fact of easy observation, that women, and brutes of the female sex, are much more attached to their young than the other gender. The female head has a greater narrowness, but also a greater proportional length, than the male, and generally extends in the region of the occiput, giving a drooping appearance to the back of the head, which is seldom observed in the cranium of the other sex. In the monkey tribe, which manifests an extreme attachment to the young, it is very large; and in the Caribs—a savage nation, the Hindoos, and the Negroes, there is also a large national endowment of the

organ, and a corresponding manifestation. Negroes and Hindoos, brought to Europe, always endeavour to get the charge of children.

Dr. Chalmers, with his usual eloquence and his wonted sagacity, observes, "It is not because prompted by a sense of duty, but under the force of a mere natural proneness, that mothers watch so assiduously over the helplessness, and fathers toil so painfully for the subsistence of their children. The good is rendered, not by man acting as he thinks he ought, or under the force of a moral suggestion, but by man acting because he feels himself constrained as if by the force of a physical necessity—not surely, because in the exercise of a sovereign liberty he hath assumed a lordly ascendant over all the inferior passions of his nature, having in it all the might and mastery of a passion. The instinct of animals is a substitute for their wisdom, but at the same time a palpable demonstration of the wisdom of God. Man also has his instincts, which serve as the substitutes of moral goodness in him, but which therefore mark all the more strongly by their beneficial operation, the goodness of his Maker." The doctrine here expounded, receives singular corroboration from the fact, that in the ratio of the savageness and ferocity of every tribe, and therefore, of the weakness of its sense of duty, is the size of Philoprogenitiveness increased, and its manifestation enlarged. As Benevolence is feeble this organ is active, without which, indeed, the races of uncivilised man would become altogether extinct. Galba Sergius, though accused of the assassination of thirty thousand Lusitanians, and on the point of being banished, was absolved by the people, who were moved to pity, because, shedding tears, he pressed to his bosom two children of tender age. Such a case shows clearly, that with a heart of the most obdurate cruelty towards grown men, and, therefore, a total absence of philanthropy, there may, and does coexist, the most tender regard for the young and helpless. Scott has illustrated the same principle in the Wild Boar of Ardennes, who, a monster in all respects, indulged the fondest affection for his son.

The reason why this organ is, and should be, largest in the female head, is extremely obvious; but while to some, of weak or strong intellect, children are objects of intense attachment, others, of the same general calibre, find them emphatically a bore. The prattle of childhood, while agreeable to many of very indifferent Benevolence, is an object of aversion to not a few of a totally opposite general character. Titus Andronicus, the most vile, savage, and horrible of Shakspeare's characters, after murdering thousands of his fellow-creatures out of sport and from selfishness, sacrifices his life for the safety of his infant son. A woman, mentioned by Dr. Adam Smith, was in a state of distraction when a rumour of drowning made her suspect that her little Tommy had fallen into the harbour. But her mind was entirely relieved, when she found it was only the Royal George that had gone down, with thousands of her fellow-creatures on board. This is attributed to selfishness, but that would have made her care as little for Tommy as for the rest. Her sentiment evidently proceeded from small Benevolence and large Philoprogenitiveness. There have been instances of the reverse, where a man of small Philoprogenitiveness and powerful Benevolence has been more moved by a general calamity, than by the loss of his own child.

As Amativeness, when concentrated upon a single object, seems to stimulate all the faculties to an agreeable state, and to magnify the qualities of the beloved one into the highest graces and the most perfect virtues, so does it seem to prevail with the organ of Philoprogenitiveness, which, when active, cannot perceive in a child any thing but perfection. An endowment of the organ to a considerable extent, gives a certain, although not easily definable, manner, look, and attraction, to the individual, which children discover and feel at once. Indeed, if they be asked whom they like best, the answer will accurately point out the real possessor of this faculty. His presence among the infantry is a jubilee; they ask him to play with them; they pull his skirts; they ride upon his stick; they climb his knees, and to him they tell every thing they recollect, and run to show him every thing they have. Such a man has invariably in his waistcoat-pocket a modicum of sweetmeats, which he is as careful to replenish as the vestals wore the sacred fire. If an individual, deficient in this organ, attempt to propitiate a mother, by showing himself on an occasion mindful of the children, they will detect the cheat at once; for here the best acting has critics who are to be satisfied with nothing short of nature. His clumsy caresses, and elephantine fondling, make the deception too transparent even

for ordinary observers. Those persons who are not gifted with this faculty in an available degree, however benevolent they may be, find children a nuisance, and the maternal exhibition of, and expatiation upon them, as the greatest annoyance. They are intolerant of any but the most pretty behaviour, and are often in society made monsters or bugbears of to the infancy.

“He’s a terrible man, John Tod, John Tod;
He’s a terrible man, John Tod:
When he’s passin’ by,
The mither’s a’ cry—
Here’s an ill wean, John Tod.”

The mistresses of families practically recognise the existence of this faculty, in their choice of nurses and child’s-maids. They will acknowledge that a servant is lazy, and has a bad temper; but then she is always kind to the children, and would put herself to any trouble to serve them. It is often observed, too, that some servants have what is called a genius for keeping children, which just arises from the insensible and powerful influence of this organ. Certain nursery-maids, with the greatest solicitude, and the utmost anxiety to please and conciliate their little charge, never succeed; while others, seemingly without effort, and without labour, will amuse an infant for the live-long day; keeping it and the rest of the children cheerful, contented, and boisterously mirthful. Nay, we have seen the very same means used by two strangers to make an infant smile, when the one failed and the second succeeded, solely by a small and large endowment of this propensity. For the same reason, also, some teachers are more liked by their scholars than others.

When individuals, as for example, many unmarried females, have not the legitimate scope of children for the exercise of this organ, it actuates them to make pets of lap-dogs, parrots, cats, monkeys, and even pigs. From the earliest age, nature begins to teach woman the part of the mother, and makes her pass through the different degrees of instruction to prepare her for her future destiny. Observe the little girl, so seriously occupied in playing with her doll. She dresses it, undresses it, decks it in fine clothes, feeds it, gives it drink, prepares its night-linen, puts it to bed, takes it up often, caresses it, gives it its lesson, scolds it, threatens it, and tells it stories. In this way she spends the whole day, weeks, and even months, with her dear doll. It is with hearty good-will also, that she assumes the care of her younger brothers and sisters. She feels more acutely than they, their joys and their sorrows. Hardly does a new desire arise in her heart—nothing in the world has greater value or more charms in her eyes than babies. While visiting a lunatic asylum, we observed in one of the female inmates, about 38 years of age, a very large development of this organ, and remarked to the physician of the establishment, that she would manifest extreme solicitude about children. He mentioned that she had no children, but that it was certainly remarkable, that most of her time was occupied in dressing, undressing, and nursing dolls.

Some mothers are ashamed of the indifference which they experience for their children, compelled, by almost an aversion for their society, to send them out to the country to nurse, and to banish them to perpetual exile from their presence and the dining-room. Others, who would bear the loss of a husband with amazing fortitude, would be distracted with the loss of a child. The absence of this organ is a destitution of a most powerful check upon child-murder; and in civilised countries it has been found, that in most infanticides it is poorly developed. Yet, it is certain, that where life is not held very sacred, this ceases to be a crime by being so frequent a custom. The Chinese and the Hindoos, who possess an ample endowment of this propensity, are in the daily and national habit of murdering their children; and even in Europe, shame and fear will sometimes tread out the light on the altar in the mother’s breast, which nature has kindled, and fed, and breathed upon. In such a case, the crime is dyed in crimson, double-stained.

Certain animals, unusually prolific, are singularly deficient in this organ. Male rats and boars eat their young; male rabbits, stags, bulls, cocks, and many others, attack their young and butt them away. This does not seem to prevail in cases where the animals live in the state of marriage; and we are, therefore, inclined to attribute the indifference of the others to the fact, that in them the organ of Amativeness, constantly active, abstracts the stimulus from this organ, and that the care which other animals have for their young, is only when the female is no longer in

season, and when, consequently, Amativeness in both is dormant. Concentrativeness, which probably is the cause of the married state in man, and of pairing in animals, may also probably diminish the action of Amativeness, by abstracting the circulation from the cerebellum, and it may stimulate Philoprogenitiveness by the sympathy of contiguity.

In individuals of the same species, even among the lower animals, great differences may often be seen in the endowment of this faculty. Dealers in swine pay particular attention to its manifestation, and observe that one sow brings up her litter with the greatest care and attention; while another neglects hers, permits them seldom to suck her, and sometimes overlays or smothers the whole, from carelessness or indifference. The same variations may be seen in dogs; and there is the utmost difference in hens, ducks, geese, and turkeys. In the fowls, many cases have occurred, in which the female has, by a strange bird, been driven from her own nest, and her place supplied by the intruder, who hatched the brood, and carefully tended the chickens. There have been instances in which a male turkey has thus brought up a brood of hens.*

The activity of this organ seems also to excite its neighbour Combaticiveness, by a very wise provision of nature. The most timid females often perform, in the cause of their children, the boldest and most heroic acts; and history tells us, that in war, mothers have inspired the combatants with irresistible courage, by holding from the battlements their infants to their fiery eyes. The feeblest and most timid animals are bold when they have young. The most obedient and kindly spaniel becomes furious in such a cause; the lapwing, as the stranger crosses the field where its nest is, flies almost upon him, in order to divert his attention from the brood; and the hen acts not on the defensive merely, but uniformly attacks all who but appear to approach.

But we are convinced that this, and all the other organs, have a function more primitive and simple in its elements, than Phrenologists have hitherto supposed. Their phenomena, if analysed with more severity, would reward the metaphysical inquirer with the discovery of a less complicated, and, as it appears to us, a more philosophical view of the nature of the faculties. Love of Offspring appears to us a term scarcely less logical than Love of Murder, and manifestly indicates only one of the uses of the organ, not its ultimate function. Mr. Combe observes, with perfect truth, that "the intensity of this feeling bears a proportion to the weakness and helplessness of its objects, rather than to any other of their moral or physical qualities. The mother doats with fondest delight on the infant in the first months of its existence, and bestows most of her affection on the feeblest member of the family. Thus, the youngest is the reigning favourite, unless there be some sickly being of maturer years, who then shares with it the maternal sympathies. The primitive function of the faculty seems to be, to inspire an interest in the helplessness of childhood; but it gives also a softness of manner in treating the feeble and delicate even in advanced life." It is surprising that Mr. Combe should, after so clearly pointing out the phenomena, have fallen short of the originating principle. He has observed, that the organ incites to attachment, even for age, if enfeebled; and to the older child preferably to the younger, provided it be more helpless. The youth of the object is not, therefore, the cause of the incitement of the organ, but its helplessness; and its function is thus most probably to give attachment to weakness, and to produce compassionate endearment towards feeble and frail imbecility. That its effect should be to inspire most tenderness for earliest infancy, is not wonderful, because there is then the greatest natural helplessness both of body and mind. But that it is not the mere infancy that creates the emotion, is also evident; because, although a son or a daughter be ever so old, still, if they be idiots, or a mental helplessness continue, the attachment of the parent is greater towards such a being than to the rest of the family. Even blindness or dumbness create, though in a less degree, the same effect. In many countries, an innocent, or idiot, or crazy person, is

* Vimont, Gall, and Broussais, have all propounded peculiar theories as to the effect of emasculation on this organ. The whole matter seems to be solved by the fact, that Amativeness being, in such cases, small, and its function altogether in desuetude, the cerebellum abstracts nothing of the circulation from the neighbouring organ of Philoprogenitiveness, and thus the latter has the share of two organs in stimulus, in place of one. Animals are never amative when they are tending their young. It is only when Philoprogenitiveness is not in commission, that No. 1 is not laid up in ordinary.

beloved, respected, and revered. Holman, the blind traveller, traversing a great portion of the globe, found the helplessness produced by his infirmity, a universal passport to kindness. African travellers mention, that they are always cherished when they are sick and wounded; the females*, meanwhile, chanting songs, in which the helplessness of the stranger, and the sacred duty of hospitality towards the weak, form the whole subject. To injure the helpless, is a crime against which the spirit of even the most savage revolts. To strike a woman, is only equalled in the abhorrence which it creates, by striking a man when he is down. So of injuring a person "when his back is at the wall." Dr. Chalmers, with his usual acuteness, seems to have detected this principle of nature. "The first instance which occurs to us, is that law of affection, by which its intensity or strength is proportioned to the helplessness of its object. It takes a direction downwards; descending, for example, with much greater force from parents to children, than ascending from children to parents back again—*save when they lapse again into second infancy*, and the duteous devoted attendance by the *daughters* of a family throughout the protracted ailments and infirmity of their declining years, instead of an exception, is, in truth, a confirmation of the law; as much so as the stronger attraction of a mother's heart towards the youngest of a family; or more impressive still, her more special and concentrated regard towards her sickly, or decrepid, or even idiot boy." Here this law of affection seems to rest entirely on the helplessness of the object, and thus to reconcile all the phenomena of the faculty. Persons who are innocent and harmless, are uniformly loved, irrespective of the possession of any other quality; and our sympathies are stronger on behalf of meek, patient, and unresisting suffering, where helplessness presents to us its nakedness, than virtuous or dignified fortitude can ever inspire within us. Who does not feel the power of the description of Christ's death, tenfold enhanced by the resigned, and patient, and unaggressive submission of his conduct? "He was led like a *lamb* to the slaughter; when he was reviled, he *reviled not again*; as a sheep before her shearers is *dumb*, so he *opened not his mouth*."

"The greatest one that e'er wore earth upon him,
Was a sufferer;
A meek, mild, gentle, humble, tranquil spirit,
The first true gentleman that ever breathed."

The function of Benevolence, is, to sympathise with calamity and to remove unhappiness; that of Philoprogenitiveness, to love and to cherish helplessness, its heart yearning most towards him who is left to buffet with a world which is too rough and boisterous for one whose uncomplaining softness makes him the sport of every rude aggressor. Thus do we weep for

"The oppressor's wrong, the proud man's contumely,
The insolence of office, and the spurns
That patient merit of the unworthy takes."

Shakspeare refers our tenderness to the very same sense of unprotectedness in the object, and describes

"Pity, like a *naked new-born babe*."
"Had you not been their father, these *white flakes*
Had challenged pity of them."

What a peculiar thrill is given to the horror of murder, when it is said,

"Who would have thought the *old man* had so much blood in him?"

And what truth and nature is there in the tender feeling, in which Joseph, in a foreign land, asks, in disguise, at his brothers, for his father, in the words, "Is the *old man* alive?" That the operation of this feeling is more universal, than in its application to one's own offspring, is seen in the love of pets, dolls, or the children of others, and even in the lower animals. The hen brings up ducks, the male turkey drives the hen from her nest and takes her place, a lion cherishes a helpless lap-dog, dogs suckle young kittens, and cats nourish pups.†

* Mark that the Africans and females possess this most largely, but in general have a smaller development of Benevolence than Europeans or males.

† Is not the sense of beauty associated with all our propensities? A gentleman, singular for his hatred of children, called them *soft, fat wretches*." The most celebrated painter of children depicts them as soft, fat, and smooth in the flesh. The Negroes, whose Philoprogenitiveness is very large, are (as likewise the Hindoos) extremely fond of soft, fat persons, as are the Esquimaux, in whom parental attachment is very powerful.

When in a state of disease, this organ produces great anxiety about children. Dr. Andrew Combe's patient, who during her illness always imagined that fresh disasters were happening to her children, complained of pain at the site of this organ. At Vienna, Paris, and Amsterdam, Dr. Gall saw young ladies who declared that they were pregnant, although no such thing was or could be the case. A man also declared that he was with child of twins. In these, the organ was very large, and probably gave this turn to their hallucination.

SECTION III.—*Organ III. Concentrativeness.*

THE organ of Concentrativeness is one of those the hemispheres of which are only separated by the falciform process, situated in the medial line of the cerebrum, immediately above the organ of Philoprogenitiveness, but not extending so far laterally, and directly below Self-Esteem. Sometimes the protrusion of the organ is perpendicular, but we have often found its ridge run in a horizontal direction or transversely; which variation, coupled with the fact, that it is sometimes found to protrude considerably immediately at its junction with Philoprogenitiveness, and at others, to leave at that point a complete hollow, while it is fully developed at the point of the base of Self-Esteem, gives some countenance to the opinion of Vimont, that the locality usually assigned to it is the place of two organs. The lower one, next Philoprogenitiveness, he designates, "*Organe du choix des lieux*," which prompts animals properly to select and to become attached to the places best adapted to their habits; and the upper he calls "*Organe forçant une faculté à continuer son action*," and describes as the seat of a faculty which produces involuntary continuity of action in other organs. It will be at once seen, that this function does not coincide with that definition of a faculty, wherein it is held necessary to its character, as a fundamental principle, that it should be capable of acting alone. In the meantime, we shall, however, continue the assumption of the position of the organ generally prevalent. On either side of it will be found the organ of Adhesiveness. If these surrounding organs be largely developed, they will produce the appearance of a hollow at the seat of this one, even although in the abstract it should exist in average endowment; and should the others be very small, of course it will appear larger than is warranted by fact. Its development is carefully to be distinguished from the upper part of the organ of Philoprogenitiveness, which frequently carries rather farther up than its own apparent region an angle of the bone which covers the brain at this part. It is very necessary to note the breadth of this organ, which, as in all other cases, forms an important element in the estimate of its size.

There is no organ, relative to the functions of which so great a variety of opinion exists among Phrenologists as this. Dr. Gall did not believe in its existence at all. Dr. Spurzheim named it the organ of Inhabitiveness. Mr. Combe gave it the designation by which it is now universally known, and also a more general and somewhat different function. From this, Dr. Spurzheim altogether dissents, and other Phrenologists differ from the whole three.

Dr. Spurzheim designs it the faculty whereby some animals swim, others fly, many live in high or in low situations, the eagle soars in the upmost regions of the air, and others, more humble, keep nearer the earth. We may well ask, how the faculty which makes a bird fly, also prompts a serpent to creep, a fox to run, and a fish to swim? If the old and most unphilosophical subterfuge be still resorted to, of the one being a modification of the other, let us at once call, in the same way, Cautiousness a modification of Combativeness, or Benevolence of Destructiveness. To suppose that it is one modification of a faculty which prompts a fish to swim, another of the same organ which makes one bird take to the middle, and another to the top of a tree, is just about as rational as to imagine, that the organ which induces one man to hoard a sixpence is a specific modification of the instinct which actuates another to hoard shillings. Why not, upon the same principle, have an organ of Nautiveness or Volativeness? If every action, of every animal, demands, in this way, a specific organ, having a determinate and very limited function, why not introduce a propensity of Saltativeness for the especial benefit of the squirrel or the tiger; or why does not the remarkable use which the kangaroo makes of his tail, suggest, in the new crea-

tion of cerebral peers, one by the style, title, and dignity of Caudativeness? We might expose the absurdity of this more at length, but shall only observe, that it argues a tendency to mere quackery, of which Dr. Gall would never have been guilty. Dr. Spurzheim must have possessed a very superficial knowledge of zoology, if he could find no other reason for the eagle flying high, and the duck low, than the existence of the same faculty in different modifications. The eagle lives in air so rarefied, that half the distance upward would force the blood from the ears and nostrils of man in a torrent; and he flies in a region, that any other bird, for the same reason, could not live in, even if its inferior eyesight did not render it incapable, at such a distance from the earth, of detecting the sea or the land. Dr. Spurzheim, in this, as in a thousand other cases, has attributed to cerebral faculties zoological phenomena, which are the result altogether of varieties of corporeal and organic conformation. We hold it altogether unphrenological to suppose, that a blind instinct can possess the powers of discriminating habitations or elements, and believe this to be the province altogether of the perceptive faculties. So much is this the case, that we see every day altered circumstances produce altered habits. Dogs point, instead of running forward, and swim, which is not their nature. Herbivori become carnivorous, sheep take to drinking whisky, cats live in society with birds and mice. Sheep in three generations take at last to turnips; and although originally natives of the English flats, become naturalised to the Scotch hills. A sea-weed becomes a cabbage in a different region. And in short, the habits are more formed by the locality, than the locality chosen from the habits.

Mr. Combe's view of the function of this organ is thus expressed:—

"Some persons possess a natural consciousness of every thing that goes on in their own minds; in which power, others seem to be remarkably deficient. The former can detain their feelings and ideas, and deliberately examine their character and consistency; the latter cannot do this, their minds are like the surface of a mirror, on which each feeling and thought appears, like the shadow of a moving object, making a momentary impression and passing away. They experience great difficulty in detaining their emotions and ideas, so as to examine and compare them, and in consequence, are little capable of taking systematic views of any subject, and of concentrating their powers to bear on one point. I have observed this organ to be large in the former, and small in the latter."

"In conversing with some individuals, we find them fall naturally into a connected train of thinking; either dwelling on a subject which interests them, till they have placed it clearly before the mind, or passing naturally and gracefully to a connected topic. We meet with others, who, in similar circumstances, never pursue an idea for two consecutive seconds; who shift from topic to topic, without regard to natural connection, and leave no distinct impression on the mind of the listener; and this happens even with individuals in whom reflection is not deficient. A gentleman, bred to the profession of the law, who has this organ rather deficient, declares that the effort of concentrated thinking is to him painful, although he has excellent Comparison, Causality, and Language."

"It has been said, that Individuality and Eventuality when large, produce the effects here attributed to Concentrativeness; but I am acquainted with a literary gentleman in whom these organs are large, and Concentrativeness deficient, and who manifests great knowledge of facts and details, combined with deficiency in the power of keeping them continuously before his own mind, so as to discover their relative bearings and applications. On the other hand, I am acquainted with a philosophical author, who possesses large Concentrativeness, with deficient Eventuality, and who complains of experiencing great difficulty in acquiring knowledge of details; but who, in reproducing his knowledge as an author, labours incessantly until he has discovered its natural relations, and gives it forth in the most concentrated and systematic form.

"The quality is much more conspicuous in the poetry of Thomas Campbell and Crabbe, than in that of Sir Walter Scott."

"It has been objected by him (Dr. Spurzheim), that Concentrativeness cannot possibly be a primitive faculty, since it can neither act alone, nor appear diseased singly; and since its very existence only becomes apparent by the presence of other powers directed to one object. There are various faculties which *very seldom* act alone: thus, Firmness *usually* acts along with other powers; we persevere in passion,

in love, in hate, in ambition, or in study; but cannot well persevere in mere abstract perseverance. Cautiousness causes us to fear; but *we generally* fear something which depends on other faculties, and *rarely experience* abstract fear itself. *Concentrativeness, therefore, is not singular in not acting alone.* I have no doubt of the *possibility* of its acting by itself, although, from the rareness of its doing so, and the obscurity in which the ultimate function is involved, I cannot specify the effect which it then produces."

Mr. Combe here meets Dr. Spurzheim's objection, that Concentrativeness cannot be a primitive faculty, since it *cannot* act alone, by the statement that it is not singular in this respect, because other faculties *very seldom* act alone; *usually* act along with other powers; that we *generally* fear something, and *rarely* experience abstract fear itself; and although this very modification of the expression is an admission that other powers *can* act alone, made in the same sentence in which it is said that Concentrativeness is not singular, in the respect that it *cannot* act alone, the period is wound up by the author's statement of confidence in the possibility of that faculty being self-motive, which he had before admitted could not act alone.

But, by Mr. Combe's very hypothesis, this organ can never act until the other faculties have commenced to operate, and its activity must cease with theirs. If, recognising the face of a friend, Form be aroused, Concentrativeness must cease to prevail the moment Form is quiescent; because, it then no longer holds the latter in action, which is its function. This can be said of no other organ. Cautiousness makes us pick our steps in the dark, or indulge in undefined fears. Firmness may enable a man to sustain the amputation of a limb with fortitude. Is there any thing else concerned here? Assuredly not.

What would be the effect of a power of "detaining thoughts and ideas, and of deliberately examining their character and consistency?" When the organ was large, it would produce *paucity of ideas*, because, having taken one idea into custody, it would refuse to let it go, and thus no *second* thoughts, which are proverbially best, could enter the mind. How could it, a blind propensity, "systematise knowledge," or pick and choose among ideas and feelings? Or how, by merely detaining ideas, will it make the next in succession german to the last? Relevancy is manifestly an effort of the intellect, and the reflecting faculties account for all the phenomena of Concentrativeness. Temperament, and the size of the organ, are all that are necessary to the production of vivid impressions, and these made, are either retained or recalled, according to the strength of conception. Barry, the painter, with large Wonder, Form, and Colour, saw standing before him the apparitions of Wallace, Edward I. and Baliol. They stood so long, that he had time to paint each; and they sometimes remained for days. A clergyman involuntarily detained the idea of the tune of Maggy Lauder, and had to sing it, much against his will, heartily in his own garden on Sunday, to get quit of it. But no one ever supposed any thing necessary to the production of such a state of mind, but extraordinary or diseased activity of the organs. Deficient reflecting faculties will produce a rambling style of thought and conversation, from two causes; an incapacity to perceive relations, and a want of the habit of thinking at all. A fragile cerebral temperament will produce an incapacity for continuing the exercise of any of the organs for any length of time, and a connected series of thought, which partly arises from the employment of one set of faculties for a period of time, will, in a brain of bilious temperament, be easy, while, in a nervous or sanguine temperament, where there is no cerebral *muscularity*, if we may so speak, it will give extreme pain. Accordingly, in Dr. Andrew Combe's patient, the conversation was quite rational and connected, so long as the brain was not in a state of high sanguine action; but whenever the blood became copious in its flow, incoherence instantly followed. In a lymphatic brain, there will be no detention of ideas, because the power of conception is so extremely weak, that mental impressions, scarcely legible at first, soon melt like breath into the wind.

How many persons are there, who apparently ramble in conversation, but in a set address always speak to the point? We at least know many, who, in the ordinary chit-chat of social life, shift from topic to topic, without logical connection, but are very relevant while upon each; systematise their knowledge with great precision, and reason with the most consequential severity. Let it be remembered that if Concentrativeness be a propensity, and have for its function what Mr. Combe describes,

it cannot, at its will, go from topic to topic, but when large, must force the mind to remain in a state of one idea in spite of itself.

Mr. Combe has remarked a rambling style of composition in a gentleman possessed of large Eventuality and Individuality, and a close and connected character in the thinking of one in whom these organs are deficient. But the irrelevancy of the former is more apparent than real. When Eventuality is large, it is continually suggesting the train in which ideas were *originally* connected in the mind. It has a busy and active memory, which recalls in a moment all the topics which were once associated by even the most slender sequence or relation. We have known an individual of this character, who, when the conversation turned upon the works of Dr. Channing, for example, began to talk of the issue of new fourpenny pieces from the mint. This appears a transition sufficiently abrupt; and yet, on tracing the connection, which he explained to us, we shall see that Eventuality made it, so far as his mind was concerned, relevant enough. The mention of Dr. Channing was associated with the idea of Napoleon, whose life that author reviews. The conception of Napoleon suggested that of some silver coins thrown by the Emperor from his carriage on the evening of his marriage, which the individual had seen the day before, and had compared with the new issue, which they somewhat resembled. An individual, of small Eventuality, would commit no such solecism in conversation. When a topic is started, it suggests nothing to his mind at all. He has no prior associations to present ramifications in the subject. From pure poverty of thought, he becomes consecutive, as a man is kept sober, by being sent to bridewell to be fed on bread and water. That such a man should systematise all the knowledge he may be possessed of, is not wonderful, if we recollect the apothecary who arranged his laboratory with nice propriety, because it contained nothing but an alligator stuffed, and a beggarly account of empty boxes. That Scott should be considered inferior to Campbell or Crabbe, "in the power of collecting his conceptions into a strong mental picture, and conveying them with the full force of a sustained representation to the minds of others," is to us a marvellous thing. Were we asked whether Scott, Campbell, or Crabbe, could give greater consistency or identity to pictures of human character—which of them best sustained the leading features of particular minds—which of them manifested the greatest indication of keeping the general scope and tendency of the dispositions of his *dramatis personæ*, for ever present to his consciousness and intellect, we could never hesitate to prefer Scott to all men of modern origin.

We are therefore inclined to dissent from the views of both these Phrenologists, as unphrenological, and not warranted by facts. We say it is unphrenological, to give either a discriminating, an intellectual, or a rational function, to an organ situated in the centre of the propensities. And we observe, that it is contrary to fact, because, if there were an *instinct* whose office was to detain ideas in the mind, it must be beyond the control of the individual, and would force the continued presence of thoughts, which we nowhere observe. We have been led from observation, and from analysis, to adopt the view of the subject which we now submit to the reader.

Those who have studied the history of mankind with any degree of attention, must have been struck with the fact, that while some nations naturally, and as a matter of course, settle down to fixed society, to permanent institutions, to classified professions, to specific habitations, to certain determined districts and allotted occupations, other tribes seem to be imbued with a certain spirit of what may not inaptly be termed *vagabondism*, which is constant to nothing but inconstancy. The Swiss, the English, the Dutch, may be cited as examples of nations remarkable for the permanency of their habits, customs, and institutions; while the Tartars, the Arabs, and the Brazil Indians, may be instanced for singular destitution of this quality. Of the latter, Mr. Koster observes, that when, after the Jesuits had attempted to civilise them, "they escape, they show little capability of acting for themselves, and an evident tendency, as if *instinctive*, to return to a *wandering and savage life*; it does not arise from any feeling connected with the love of their ancestors, or a tradition of their free state; they do not appear to know that their ancestors had been slaves, much less would any knowledge be preserved of their anterior state. The Indian who has escaped from control, scarcely ever plants himself; if he does, he sells the growing crop for half its value, and removes to some other district; fish-

ing and hunting are his favourite pursuits, and he is *never stationary for any length of time*." This difference of character is as striking in individuals as in nations. Some can settle to nothing; they change their profession perhaps five or six times, their pursuits every alternate week; while others, in the most favourable circumstances for the formation of settled habits, are as inveterately vagabond as the most untameable son of the woods or the waste. Dermody, the Irish scholar and poet, commenced enacting the character of the Rambler, by running away from an indulgent parent, at the age of ten, to Dublin, to push his way. In such admiration were his talents held by all classes of the community, that he was set up in various professions and in trade, by the nobility, gentry, and commonalty of that city, no less than eight several times, and each time he chose starvation and beggary rather than the torture of permanent occupation. He was presented with a commission in the army, but left that; was put into a school as master, near London, resigned that also; was engaged regularly by the booksellers, through the interest of his powerful admirers, but broke through his indenture so often, that he was given up in despair, and died in a hovel, more happy in his eleemosynary life and hap-hazard fate, than over he had been as the honoured guest of nobility, and one of the most distinguished inmates of Trinity College, Dublin. Colley Cibber's daughter was "another of the same;" and individuals of the British Peerage, both in past times and even at the present hour, have taken to every variety of occupation, and have disappeared from the face of society for a period, to join gangs of gypsies, and to follow other chance-medley frolics of fortune, in which they are "every thing by turns, and nothing long." Such persons never betake themselves to any regular employment—they play at life, they do not work at it. The real business of existence is only endured so long as it is an amusement, and abandoned for something else the moment it ceases to be so. Others, again, naturally and at once settle down to a fixed plan of life—never think of change—mind their business and nothing else, being sturdy supporters of the maxim, "keep your shop, and your shop will keep you." The best lawyers are ignorant of every thing but law. The best scholars know nothing but Latin and Greek. Some mathematicians have never a thought that wanders out of circles, squares, or angles. Even the best actors are those who think of nothing but their profession, and become determined plodders.

There is no feature of modern British society more remarkable, than the infinite subdivision of pursuit which exists among our countrymen. Some men in England spend their whole lives in studying the theories of the Greek article; others think of nothing but Hebrew with or without points; many confine themselves exclusively to mineralogy, or botany, or chemistry, mechanics, painting, astronomy, or law; nay, to peculiar portions of theology, to minute subdivisions of medicine, to mere isolated points of history, to antiquities that signify nothing, to tulip-fancying, dog-breaking, horse or sow-teaching, bird-breeding, even to wine-tasting or tea-chewing. Some men restrict themselves to one article of food, to one room, to a particular chair, a set part of the church-pew, a corner of a table, an individual house, a specific walk, shape of coat, or hat, or shoes, nay, the very colour of their clothes is never changed.

What, then, does all this arise from? Some Phrenologists trace it to Firmness, the faculty of perseverance, permanency, or endurance. But the American Indians, who possess a larger endowment of that organ than any nation in the world, are idle, inconsistent, wayward, and vagabond. Many persons who are abrupt, decided, resolute, even stubborn, are by no means steady, plodding, and assiduous; while others, who hesitate upon every occasion, and are remarkable for nothing so much as indecision, pursue one uniform business or object with undeviating regularity. Some men follow a project of revenge or ambition from unyielding pertinacity, even when it is disagreeable to their other feelings. These are easily distinguishable from individuals who take an unmixed satisfaction in pursuing their business, in which they are much less changeable than the most determined men. Ann Ross persevered in thrusting pins in her arm, to create the appearance of disease, and stood its amputation, solely to be exempted from following a regular calling; which shows, that large Firmness is very compatible with a hatred of pursuit, and a love of pure idleness. Others have supposed, that Temperament accounts for the phenomena, but there are idle and laborious persons of all variety of bodily constitution. It is a fashionable method of getting quit of such difficulties, to trace the appearances to the effects of custom, forgetting that habit itself has to be accounted for, and that

this particular is as evidently an original principle of the human constitution as any faculty whatever. There are some persons who have literally no habits, no tricks, no customs. Some change their whole conduct, pursuits, mode of life; these persons are surely not the slaves of habit. Others have got a turn of doing this, a trick of doing that, and a custom of doing the other thing; while the former have neither turn, trick, nor custom. There must be something in the original mental constitution to account for this. There is surely some principle which is recognised in the care with which an encroachment is avoided in the household economy of one man, "because it will put him out of his usual way," or "will put him out of sorts," or because "he has not been accustomed to it;" while it is never anticipated that others will be inconvenienced by such intrusion, although they should be of the same age, station, or profession.

These, and other considerations, have led us to think it extremely probable, that the faculty hitherto called Inhabitiveness, or Concentrativeness, is the propensity of pursuit or the instinct of object, the desire of doing, or being, exactly what the individual has done or been before, the love of continuity, of endurance, of sameness, of permanency of occupation, emotion, feeling, existence.

Phrenologists must often have observed individuals in whom all the Perceptive faculties were largely developed, equally capable of becoming painters, sculptors, mechanicians, chemists, botanists, surgeons, or mathematicians, who yet confined their attention exclusively to a single subdivision of one of these objects of study, although neither circumstances nor situation prevented them from following the whole range of their natural accomplishments. Considering that all the faculties seek gratification, and that in such individuals they are all equally large, it was to be anticipated that they would have wandered over the whole world of science, distilling from every flower of nature its peculiar sweet. There are others, with the same endowments, who confine their attention to no individual object, reserve a peculiar corner of their heart for nothing, who now study astronomy, again write a treatise on statuary, make a speech upon modern art, sketch a caricature, can, in short, do every thing, and when about to do it, leave it for some new accomplishment, to be again resigned upon the solicitation of the next faculty. There is surely more in this than has been hitherto dreamed of in our philosophy. So long as this discrepancy is unaccounted for, it seems evident that the science of mind is incomplete. Nor will it be explicable by any hypothesis which has hitherto prevailed. It is true, that there may be a natural tendency in particular faculties which have been exercised, to crave for renewed action; but there can be none in the organs themselves, for exercise in one particular mode, and upon one specific object. Besides, why should there be such a tendency in particular faculties of one mind, and not in those of another? The very continuance of the exercise must have arisen from an idiosyncrasy of constitution, seeing that the phenomenon is so far from being universal, that in a high degree it is not even common. The existence of such a faculty as we have here described, seems, however, equal to the solution of the difficulty. With a large endowment of this principle, there may be a propensity for iteration of object, and a pleasure in continuity of pursuit; while its absence will allow, in the natural solicitations of the whole faculties for exercise, each to have its share.

It must also have surprised many practical Phrenologists, to find an intensity of individual attachment, combined with feeble social feelings, or rather with a general aversion to society, and to observe persons who cannot live for a moment out of company, changing friends with as much indifference as their coat. Some also, who sacrifice every comfort of life to render their own children happy, do not care a straw for those of other people. Others, who flirt with the whole sex, are particular to none. In the lower animals may be observed the same difference. The lion pairs with his first mate; so does the eagle, the dove, the fox, the swan. They are bound to each other for ever in the ties of an instinctive marriage. The gregarious tribes, again, who cannot be said to possess a greater instinct of attachment than such fidelity manifests, do not pair at all, but change their companions continually. The former have no friends; the latter no wife. The propensities solicit gratification, but possessed of Concentrativeness in minor endowment, they are not confined in their manifestations to any particular object.

But this principle acts in an infinite variety of modes. It induced one man to pass, voluntarily, seventy years of his life, without ever having gone beyond the

walls of Moscow. A Cockney, who had realised £50,000, in a beef-steak shop, retired. He was, however, so miserable, in consequence of a change of pursuit, that he returned and acted as shopman to his successor in the business. This is in effect a tradesman's nostalgia. Another man, longer in business, and as wealthy, feels no such inconvenience from the change. From what does this arise? We cannot account for it, except upon the principle of one possessing a propensity which another wants.

We have already hinted at the probabilities of this organ being the origin of habits and customs. We have known persons who, through their whole lives, dressed in exactly the same colours, upon which circumstance the comedy of the Green Man is founded. One of this class, whose dress for forty years has been blue coat, white waistcoat, drab breeches, and long gaiters, having breakfasted out of a peculiar china cup for thirty years, was nearly driven mad by its being broken, and sent emissaries, at a considerable expense, through the whole of London, to procure another of exactly the same pattern. Of another individual, from whose bust, sent to us anonymously, we predicated that he would be a mere bundle of habits; that he would be plodding and assiduous at his business; that he would love the country; but would seldom go abroad, and never change his residence; all inferred from the size of this organ, with its combinations: it happened that every statement corresponded exactly with the fact. The lawyer in the Spectator, whose whole eloquence was destroyed by the want of a pack-thread, which, in the course of pleading, he was in the habit of rolling round his finger, is another illustration of the same theory. Some persons cannot compose, except at a certain desk, or in a particular room. Many objects for which we have not, and cannot have, the slightest veneration or respect, please us, because they have always existed, and remained through all the changes of our lives. When they are discontinued, we are grieved, if not irritated. Persons of plodding and stationary habits, are peculiarly susceptible of these attachments. If they have used even a penknife for a number of years, they are much annoyed by the loss of it. The feeling seems to be an element of Toryism and patriotism, being the true source of the sentiment, *Anglæ nolunt leges mutare*.

The destruction of continuity—the change of object or pursuit—the cessation of what has long endured, gives a great and decided shock to the feelings of many persons, who have numerous other means of supplying gratification to the same set of faculties which were formerly exercised. The horror of death is attributed to a particular faculty; but, at all events, a mode of powerfully enhancing it, is the disagreeable excitement of this organ, produced by the conception of the discontinuance of “all forms, all pressures past, and trivial fond records.” The principal power of Gray's *Elegy* arises from a description of a variety of familiar and regularly recurring duties and domestic incidents, which have ceased, and are to be ever terminated:—

“No more for them the blazing hearth shall burn,
Nor busy housewife ply her evening care;
No children run to lisp their sire's return,
Or climb his knees the envied kiss to share.
The breezy call of incense breathing morn—
The swallow twittering from her straw-built shed—
The cock's shrill clarion, and the echoing horn,
No more shall rouse them from their lowly bed.”

Sheridan, in whom the organ was largely developed, after he had fallen on evil days, and had outlived the power to please others and himself, strongly expresses the sentiment, in these beautiful lines:—

“The dew-drop that falls from the dark eye of night,
Is a tear for the joys that have flown;
I look'd for the flower, where I find but a blight,
And weep for the days that are gone.”*

The Jews powerfully manifest this faculty in their love of tradition, of ancestry, of the continuity of all the customs, laws, and habits of their forefathers. The Eng-

* It is proper here to recollect that Sheridan's bust was taken after death. Before that, he had, for years, “lost all his usual mirth, and foregone all custom of exercise.” He was no longer witty, or happy, or cheerful. Why? Must not the brain have changed with this alteration? and, if it did, the development ought to have exhibited faded powers of humour or satire, without the necessity of supposing that he never possessed wit at all.

lish also, are especially fond of precedent, and their Episcopacy puts forth its pretensions upon the very same ground as Popery, that of a title unbroken in the links of its succession from the time of the Apostles. They are continually searching records for *precedents*, and do every thing in one way, because it is usual, objecting to another course, solely because it is uncommon.

Dr. Spurzheim's observations on the organ, seem to corroborate the views we have ventured to entertain. He states, that he saw a clergyman at Manchester, particularly attached to his dwelling-place, insomuch that he would have been unhappy if obliged to sleep elsewhere. He also observes it to be well developed in the Malays, New Zealanders, Esquimaux, and Negroes, but small in the Tartars; which exactly corresponds with the greater continuity of pursuit manifested by the former than the latter. Mr. Combe finds the organ small in the American Indian, noted for his want of industry, and distaste for continued employment. But so far as habitation is concerned, it is evident that it does not predispose to altitudes, because the Dutchman is as fond of his dykes, and of a residence below the level of the sea, as the Switzer is of his Alpine locality; and even when the former nation emigrated to America, they located themselves, if practicable, in a swamp. They are both equally remarkable for their settled habits, and for assiduous attention to the business of their peculiar occupations.

The idea of eternity, perhaps, arises to some extent from this organ. Burke, himself a man possessed of a large endowment of Concentrativeness, has defined a form of sublimity to be, the idea of endless continuity; as, an illimitable wilderness or sea; the immensity of space; pinnacles, whose heads buried in the clouds continue the chain that links earth and heaven.

It seems also to be an element in the constitution of Contentment. When it is small, individuals have a peculiar dislike to the precept, "in whatever state they are, therewith to be content." They never can contract the habits necessary for the situation. Hope, of course, leads to a bright view of the future; but there are persons who indulge in no sanguine anticipations of what is to come, but are cheerful and contented with a present very indifferent situation.

This organ cannot yet be considered as established. The various opinions which have been started relative to other organs, also encroach upon the functions of this. M. Broussais concurs in the opinion of Dr. Spurzheim; while M. Vimont refers to an organ which is usually supposed to be the external portion of Philoprogenitiveness, as a separate faculty, which he calls the instinct of marriage; and also declares that the function of the upper part of Concentrativeness, is to enable the individual to hold his other faculties in a state of action. He comes to this conclusion, from having remarked it very large in all animals which are susceptible of long continued attention, and which it is difficult to distract from their object. Such quadrupeds, for example, as the pointer, and most of the feline tribe, who display the utmost patience in watching and entrapping their prey. "The first observations of this Phrenologist," says Broussais, "were made upon the pointer, the fox, and the cat, at the moment she is pouncing upon her prey; but it was not (we quote his words) until he had collected nearly seven hundred *crania* of birds, and found the same development in all those who *study* their prey, whatever they might be, that he felt himself convinced." As we mentioned before, Vimont supposes the under half of this organ as separate from the other, and designates it, that of "the choice of places."

SECTION IV.—*Organ IV. Adhesiveness.*

ADHESIVENESS is situated immediately on each side of the last organ, below Love of Approbation (No. 11), and directly above the lateral portions of Philoprogenitiveness. It is appreciable both by its protuberance directly backwards, and by the breadth of the head on each side of Concentrativeness. The latter indication is the best mark of a large endowment of the organ.

It is the faculty of Attachment, as generally described in Phrenological institutes, and is said to inspire with affection—to be the genius of friendship—to give the confiding, loving, endearing warmth of fervid constancy, in one being towards another.

The existence of the social principle is so universally recognised, that it would

be absurd to waste words on evidence in its favour. Every town, each village, is a pregnant evidence of it; the very first aphorism of our religion, that it is not good for man to be alone, is conclusive of it, while it furnishes a corroboration of the aphorism. The gregarious habits of the lower animals arise from the strength of this organ, and the power of it in them, is matter of every-day observation. The horse is possessed of very large Adhesiveness, and, accordingly, it is the practice, when one is placed in a park, to give it a companion for company. It is notorious among farmers, that neither horses nor cattle thrive so well when separated, as when together, and that some will not feed until impelled by pressing hunger, unless they have a companion. When one of two horses is taken from a park, the other stands at the gate; and neighs the whole day for his absent neighbour. When the latter returns, the mutual felicitations which ensue, demonstrate more plainly than words, the delight of their reciprocal companionship. If he come not back soon, the solitary tries every method of getting out of the field—to rub down the bars, or to take a hazardous leap—and he comes to the stable-door, and waits for a long period in anxious expectation of his absent friend. Cows that have been accustomed to herd, become lean, and give little milk when separated; so also of sheep. This propensity for society, is not among the lower animals inherently classified into genera or species. A wedder which grazed in a herd of cows, would not leave them. When the latter repaired to the cowhouse to be milked three times a-day, the former entered it along with them, and when driven away, it eluded the cow-boy to stay beside its vaccine friends. A herd of sheep for some time grazed in the same park with the cows, but the wedder never joined them, remaining with his former companions. A she-ass also adopted the same practice. It herded with the cows, and when shut up in the field till they should be milked in the cowhouse, it found out a method of opening the gate, and ran into the byre beside them. We have seen a similar companionship betwixt a dog and a cat; and a mutual sociality betwixt either of these animals and a horse; is not uncommon. A carrier's dog is extremely fond of the waggon-horse, and the attachment is quite mutual.* The affection of the horse and dog to man (which does not exist when the animals are in a state of nature, showing clearly that Adhesiveness is universal in its application, and indiscriminate in its objects), is matter of every day observation; and the seal, an animal of the sea, and never destined by nature for human companionship, becomes so passionately fond of its master (such is the pliant disposition of the propensities), that it will follow him, and die if he leaves it. Dogs often play with each other for whole days. We have known a terrier and greyhound establish a regular hunting copartnership, in which the fine scent of the one found out and started the game, while the keen sight and swiftness of the other kept it in view, and ran it down. This has continued for years, and seems to have originated in the social principle.

Among mankind, the phenomena of this faculty are exceedingly palpable. There are some persons who cannot live out of society, or exist for an hour without company. They are continually forming acquaintances; they for ever mix in new circles; they know every body. If you walk the streets with them, you suspect they are practising for the office of mandarin. Their head is in a continual nod, like the china figures in a tea-merchant's window. Their hands grasp at the digits of every alternate passenger, so that they literally shake and speak their way to their destination. They never dine alone. They are censured for their fondness for company. They often neglect business, every thing, for this one object—an insatiable desire

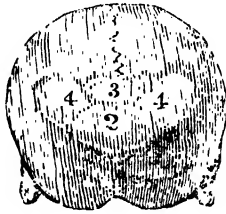
* Nothing more clearly shows the carelessness of observation, and the extreme ignorance of zoology, evinced by Spurzheim, than this circumstance. In the first place, he did not know that dogs, in a wild state, go in droves like the wolf; and comments upon the fact, that they attach themselves to man, but not to each other. He then supposes the gregarious habit a *modification* of Adhesiveness. But if he holds it necessary that there should be a particular faculty to induce animals to choose particular places or elements, why does he not also require an organ to enable them to choose companions of a particular species. In a state of nature, animals of the same genus herd together, simply because their habits are similar, and they have a common object; but whenever this is not the case, their Adhesiveness, which is blind as their Inhabitativeness is, makes them attach themselves to animals of another species in preference to their own. So of Alimentiveness, which is a general, and not a discriminating desire; it makes sheep take grass, but will make some, as we have known, when accustomed to it, take porter and whisky, while it is not till the third generation that they take to turnip, although they afterwards eat it as if it were their natural food. So of herbivori, which easily become carnivorous.

for society. They could not take a walk, or a journey, alone, for worlds; yet many companions who are inseparable, walk together a whole day without uttering a syllable. To go to the theatre, or any place of entertainment, alone, is to them misery—they would rather pay to stay at home. If in their own house they be left alone, and have deficient Concentrativeness, they instantly leave it; so that it is said of them, they are to be found any where rather than at their own fireside. It matters not that these men have wives and children, their propensity is only satisfied by a companionship with the entire population. Others there are, as regular in their business, as punctual in their walks, as sedulous in their attendance upon theatres, or concerts, or public meetings, who are never seen with any companion at all; they are acquainted with nobody, they are always alone, they have no friends, hardly a nodding acquaintance, and, if not engaged in business, not even an individual who knows them. When they take a journey, it is by themselves. If in a stage-coach, they fall asleep, or coil themselves up in a corner. These two characters are the result—the former, of a large endowment; the latter, of a deficiency of this organ. Of course, all counteracting faculties are, in this description, assumed to be absent.

Of another description of individuals, Mr. Combe observes, "Some men have many acquaintances, but few friends; while others remain attached to certain individuals during every change of circumstances, and do not readily enlarge the circle of their intimates. When the organ is large, great delight is felt in friendship and attachment; the idea of distant friends often presents itself; and the glow of affection rushes into the mind with all the warmth and vivacity of a passion. Those in whom it is small, care little for friendship; 'out of sight, out of mind,' is their maxim." We cannot concur in this principle of analysis. If the fundamental element of this faculty be the desire of society, it ought to be largest in those who form the widest circle of companions. If, on the contrary, a person have few acquaintances, he ought, according to this definition, to possess the organ only in a limited degree. Yet it is clear, Mr. Combe holds that a person who does not enlarge the circle of his society, but is much attached to a very few friends, ought to have the organ in ample endowment; while the individual who is acquainted with every body, but does not attach himself passionately to one, ought to have it deficient. This does not quadrate with the principles which establish the functions of other organs. We cannot see, that because a man enlarges the sphere of the operation of Adhesiveness, or changes the object upon which it is exercised, even although it should be every day, he thereby possesses it in a smaller degree than the man who contracts the radius of its operation and never changes its object, any more than we should expect that man to be less amative, who is in love with twenty sweethearts instead of one, or commences a new courtship every week, and is literally an out-of-sight out-of-mind lover, than he who never changes at all. Or take another example: we should not suppose a man less benevolent, who relieves all the poor in the parish, and strikes one pensioner off his list, to place another on, than he who only subscribes to one charity, and never introduces his name in a new subscription-book. The truth is, the violence of attachment, in these out-of-sight out-of-mind friends, is actually greater while the object of affection is before them, than even that of those who are more steady in their affection; and it is a common remark, both with regard to such enthusiastic friendships, and to the grief of the individual at the loss of the object, that the one, equally with the other, *is too violent to last*. The whole phenomena observed by Mr. Combe are, however, easily accounted for, by the introduction of the organ of Concentrativeness, in the solution of the difficulty. Simple Adhesiveness, as a blind propensity, seeks a general exercise in the knowledge of universal companionship, and may evidently be as easily gratified by a change, as by a uniformity of object. Concentrativeness, however, is fond of continuity of emotion; it is averse to change, and therefore, when combined with large Adhesiveness, inspires constancy, devotion, steady attachment, individuality of pursuit, prompting affection for a circumscribed circle, and aversion to change its members for a more extended acquaintanceship. Some are inseparable from one or two beloved friends, but care for nobody else. These persons are uniformly distinguished for a great fixity of all their opinions and principles; they are fond of their business, and attentive to nothing but their trade and their friend. Concentrativeness, says Dr. Spurzheim, "is commonly larger in women than in men;" and Mr. Combe particularly notices "the extreme constancy with which in general they adhere to the objects of their attachment," as

a characteristic in which women much excel the other sex. It is certain, that women are not more fond of society than their husbands or brothers. On the contrary, their real kingdom is their own house, where, from year to year, they are contented to do nothing but follow their domestic duties, and never to see a human face but that of chance callers, or of such as present themselves in the necessary intercourse of life. Women, too, are fonder of permanent institutions and customs, having a natural tendency to the spirit of Toryism; and this invariable, unchangeable, uniform tenor of life, appears to arise from superior Concentrativeness, which seems also the cause of the greater constancy and selectness of female attachments.

This organ, combined with large Concentrativeness, forms the principal cause of the charm which is transfused through the lyrical compositions of Moore and Burns. In the sketch of the skull of the latter, here given, their development is very conspicuous. Combined, as they are, in the national Scottish head, they are the great



feature in the national music, which, in the Jacobite airs, had so powerful an effect in producing the rebellions in favour of the Stuart family.

The organs are often found separate. When Concentrativeness is large, and Adhesiveness small, this part of the head has a conical or edged appearance; the individual does not form attachments, but devotes his exclusive attention to some other pursuit, as wealth, war, science, religion.* When it is small, and Adhesiveness large, the head is broad at this region, and is hollow in the centre, immediately above Philoprogenitiveness. The individual is unsettled in his pursuits, and impatient of lengthened application to any one subject. When both are large, there is a roundness and symmetrical filling up of the superficies of the skull.

SECTION V.—*General Observations on the Domestic Group of Feelings.*

WE have now completed the survey of what may be called the primitive domestic faculties, and the fundamental affections of animal nature—the Love of Sex, of Offspring, of Special Attachment, of the Desire of Society. We would warn the reader against the too frequent abuse of terms in which Phrenologists have indulged, in treating of these organs, in the description or analysis of human character. Because they are common to *man* with the other animals, they are termed *lower propensities*, and are said to be the great causes of crime; by which language they often hold a lower place in public estimation than their own qualities would warrant. They are not low faculties; nay, even the beasts, and birds, and fishes, which inherit them, are not low. All animated nature is beautiful exceedingly—noble—dignified—each part, after its own manner, even exalted. The very Propensities, which it has been the fashion to call lower faculties, are staple, fundamental, paramount, in the per-

* Ducrow, in whom this organ (No. 3) is largely developed, leads Mr. Combe to the opinion, that he is thus enabled to concentrate all his faculties in balancing himself. We rather think that it is this organ which gives him that enthusiastic devotion to his art, which makes him never think out of it for a single hour; and that the natural language which Mr. Combe founds upon, is only that of holding the head in an upright position, in which no leaning is given to the direction of one organ more than another. If, as we think, equilibrium is produced by the action of all the organs, the man in whom they are all equally exercised at the same time, will be the best balancer. Hence, a fine Temperament, and an equal development of all the organs, is most likely to produce the greatest perfection in this particular.

fection of human character. By them, man loves his wife, his child, his friend; by them, he is rescued from that state of idiocy which solitude engenders, or of savage life which is a condition of imperfect social relation. But for their power, society, with its paramount causes of elevation, would not have existed; and all that is tender, and kind, and affectionate, and endearing, would have been absent from the characteristics of humanity. Destitute, or deficient, or even moderately endowed with them, the most singularly gifted person, in other respects, is a poor, cold, unfeeling, unimpassioned machine, who, even although he should reason, cannot, divested of such elements of judgment, think aright. Be not deceived by the ordinary method of attributing crime to what is called an *abuse* of the Propensities. Where Adhesiveness is occupied in ardent and elevated constancy, through weal and through woe, to a husband, or a wife, or a friend, it is pursuing its natural course; and to however great an extent it runs in this direction, the faculty is not in a state of abuse, because it is only exercising its function. When this organ is said to produce infatuation, the blame should be attached to imperfect reason, which does not instruct it, and sluggish moral sentiments, which do not regulate it. That the faculty never can itself be in abuse, is plain, from the fact, that when exercised to the most intense extent, we often admire it as an instance of sublimity of character, while the direction which it receives from the intellect and conscience, is the sole test of the moral denomination of the action—clearly showing, that whenever affection is misapplied, it is as much affection as ever, but is made, by an abuse of intellect, and not of itself, an instrument of vice and misery. We endeavour to enforce the doctrine of the natural innocency of the Propensities upon the mind, for the purpose of impressing upon it the absolute imperfection of any human character that is poorly endowed with them, and to show, that although persons so destitute, may escape vice and crime, from the very absence of all temptation, they never can aspire to that warmth, and sincerity, and intensity of impulse, which form the ornament, charm, and very life, of what can alone properly be called virtue. Let it not, then, be supposed, that it is a misfortune to be largely endowed with these feelings; it is only a fault to neglect using reason and sentiment in giving them their direction and regulation. The truly miserable man, is he who never felt their warmth—who never enjoyed their sweet influence—who never experienced their genial and kindly fervour and innocency. Virtue itself is not virtue, that is not tempted; and temptation without passions, is impossible.

Let it not, too, be imagined, that the general sentiments of justice, and benevolence, and reason, can supersede these special affections. It is written, "He that provideth not for his own, especially those of his own household, is worse than an infidel;" and our religion itself, therefore, forbids us to embrace, in our heart of hearts, all society equally with the circle of our own roof-tree. If, indeed, such a cosmopolitan principle were reduced to practice, the very extension of the field of our regards, would reduce the efficacy, or rather destroy the sphere of individual usefulness. The happiness of society is surely not best to be secured by breaking each man loose from his own little home, and by emancipating him from those intense attachments which there alone work with the best applied concentration. The true well-being of social life arises from the summation of particular utilities which each man, under the impulse of his own peculiar affections, contributes to the general good. There is, indeed, the utmost difference betwixt that devoted and sustained habit of well-directed exertion, whereby these Propensities prompt us to supply the wants, multiply the enjoyments, and cherish the affections each of our own particular household, and that general principle of philanthropy whereby we are compelled to consult the happiness of the entire surface of society. The former supplies the defects of our own ignorance of the means of securing the efficacy of the machinery by which each particular felicity is made productive of aggregate enjoyment, and leads us to do that by an instinctive affection, which reason would never have been enabled to discover, however much she may admire; as the bee furnishes the best model of a commonwealth, while he is only busy in extracting the honey from his own particular flower, and has regard solely to the individual burden of his own gathered wax, which forms a unit in the strength and commodiousness of the general hive. Let us not be misunderstood in this, to maintain that a universal and diffusive benevolence is to be thus superseded or depreciated. Special affection is not to overwhelm a generalised philanthropy, but only to take its own place in the dignity of

human character. We only here vindicate the special affections from the degraded character which has been attributed to them, and to show that Benevolence itself is subsidiary to, and a superstructure upon, them. In truth, Benevolence is not an affection at all, and never makes the bosom cling to another's heart. It relieves want; it is compassionate; it is kind, gentle, distributive, averse from cruelty, desirous of diffusing happiness. But it is not loving, affectionate, or possessed of that free-masonry of soul, which, in the special affections, searches through every corner of kindred hearts, and clips them to its own embraces. Special affection here would mar the very universality of the philanthropy, the keenness of individual warmth only checking the diffusion of the genial principle. The special affections are like the intense, concentrated, and lurid glare of the burning furnace or the boiling volcano. Benevolence, like the sun, less ardent and more wide extending, is niggard of its heat to each particular continent, that it may give light and life to the entire universe.

CHAPTER VIII.

FEELINGS WHICH CONDUCE TO THE PRESERVATION OF THE INDIVIDUAL.

SECTION I.—*Organ V. Combativeness.*

IN Phrenological researches, the student has this difficulty to obviate, that he may very often mistake the action of one faculty for that of another, and may be misled by the observations of others, liable, as they are, to the same cause of fallibility. Thus, for example, when it is said that Adhesiveness produces extreme constancy of attachment and selectness of acquaintanceship, the proof upon which this statement rests, is, that where this mental manifestation has been experienced, a great developement of Adhesiveness is seen. But unless it be proved, that these coincidences appear with all varieties of developement of the other organs, it is clear that they are not conclusive of the fact. It may so happen, that large Concentrativeness has occurred in all these cases, and so may have been the cause of that constancy and circumscription of the regards which was traced to Adhesiveness, solely because that quadrated better with some favourite theory of the observer. From this circumstance, numerous mistakes have occurred, which are peculiarly illustrated in the history of the organs which we now proceed to consider.

At, or rather immediately below, the posterior inferior angle of the parietal bone, is situated the next organ, called Combativeness. Its size is indicated by the protrusion of the brain immediately behind, and rather above what is termed the mastoid process, those two bones whose edges are so prominent behind each ear. "In man," says Gall, "the organ is situated nearly an inch behind the ear, and on a level with its superior margin. When no such protuberance is found in people of this disposition, we shall find instead thereof, the distance betwixt the corresponding organs much greater than in timid people."

This organ has been called Combativeness, from its being observed to be large in the heads of all persons who are fond of fighting. But Mr. Robert Cox has observed, that its primitive tendency is simply to oppose, and may exist in great activity in self-defence. He has christened it, Opposiveness. Like the other propensities, it is a desire of pleasure, and seems to resolve simply into the love of resistance or the desire of repulsion. In the head of Charles James Fox it is of enormous size, and it is quite certain, that his fame rested entirely in his talents for opposition, for confessedly he did not appear to half so much advantage when he was on the Treasury benches, as when he headed the party out of power.

The function of this organ is described in its name.

Some men question nothing. When attacked, they retreat; when opposed, they give up the contest. An arduous duty paralyses them, they lose heart, or it sinks within them. They say at the very first, before making even an attempt, "I cannot do it." "A soft answer turneth away wrath." If they are to open a case, they

do well, but they cannot make a reply. They sit down in despair, with their hands across, in a storm at sea; and it needs the Parrys, the Rosses, and the Franklins, with enormous Combativeness, to go through, undaunted, such a scene. In religion, they hate polemics, and eschew controversy, endeavouring to convert mankind by example and by "sound practical moral discourses," rather than by clearing up points of doctrine.

There are other men who, in an occasional address, utterly fail, but who are famous debaters, and happy in a reply. From such are always selected the champions of parties. Dr. Andrew Thomson, who so long distinguished himself in the Church of Scotland for his controversial talents, possessed this organ in large endowment. These persons are imbued with the spirit of contradiction. They will not agree with you on any account, and may even regret that you agree with them. They never know when they are beaten. Others manifest this organ by the spirit of litigation. They contest every claim, and question every right; they hate to settle any thing—"Let the law decide it," is their motto. How many have exhausted a splendid fortune in contesting mere trifles! The fact, astonishing as it may seem, that the expenses of litigation in this country, exceed the sums in dispute, is conclusive of this point. An agent of this kind at last had no business, except cases in which he himself was litigant; and, upon opening his will after death, his executors discovered that they were taken bound to carry every action in which he was unsuccessful, to the House of Lords. The passion for boxing, and for all matters of what are called the "fancy," seems to arise from this organ. The love of "fair play," upon which Englishmen pride themselves, is just a desire that the battle shall not be soon ended by too easy a victory. Neck-and-neck races, or those which are most severely contested, are those which are most liked. Sir Walter Scott's works give ample manifestation of the very large development of this organ, so conspicuous in his head. Pitched battles, either in single combat, or in armies, are his forte; and he is so extremely minute, particular, and scientific, in describing exactly every "round," as it may be called, in the struggle, that no one can doubt the unction with which he treats the subject. His setting himself down, at an advanced period of life, to begin the world again, and to write himself out of £100,000 of debt, is an indication of the undaunted spirit of Combativeness, of which there are few parallel cases. The massacres of Glencoe and Saint Bartholomew, were the result of pure Destructiveness. The motto, on the contrary, of great generals who love war, and hate cruelty, is suggested by Combativeness:—

"Parcere subjectis, et debellare superbos."

The different combinations in which this organ is found, lead to apparently very opposite results. Where there is large Cautiousness, good Reflective Faculties, and large Language, Combativeness exhausts itself in argumentation of all kinds. Personal collision is avoided, and the war relates to mere abstract speculations. If a person so endowed, be a general, and possess good Firmness and Secretiveness, he will manoeuvre; he will be cool, unimpetuous, the reverse of rash. He will stand upon the defensive till he catches his opportunity, and gain the day more securely. Such a man was Fabius. If he have deficient Cautiousness, he will rush at once into action, like that consul's colleague. Robert the Bruce was a contrast to his brother Edward, in this respect. In him, Combativeness was supported by large Cautiousness and Firmness. If to these be added large Secretiveness, Language, and Reflective Faculties, the individual will become an anonymous polemic or politician, engaged in a continual paper war. It is necessary to the party man, and produces *esprit de corps*, when coupled with Self-Esteem, or Love of Approbation. The American Indians, who never fight until the odds be greatly in their favour, have not much Combativeness.

The faculty has been called that of courage, by a mistake of its function, which is that of the mere desire of opposition, and does not of itself constitute intrepidity. Persons of a testy, fretting, fuming, quarrelsome disposition, are often very deficient in courage; and those who spend their whole lives in one continued debate, often manifest very little real spirit or intrepidity. Bullies, too, possess this organ large, and yet carry little constancy of soul with them. It is, indeed, not only common, but the more general case, that men, who are of a quiet, peaceable temper, bear themselves through a quarrel with a far more undaunted front, than he who is never out of a dispute. The truth is, courage is not a single faculty, but results from a

combination of organs. In some, it is the absence of fear; in others, the resistance of fear; and, in many, the love of danger or of glory. In the struggle of contending faculties, the most predominant will take the lead. It will absorb all the activity of the mind, and for the time banish the solicitations of the rest. Where Cautiousness is small, there is an insensibility to danger, which presents all the characteristics of Courage. Persons not combative, and at the same time cautious, if they possess large Firmness, Self-Esteem, or Love of Approbation, often manifest considerable courage from their great self-command, and the fear of a charge of cowardice. Such are those who stake their lives in a duel *from fear of being posted*. These persons do not court danger, but meet it when it comes. The effect of Combateness on the manifestation of courage, is in the desire, love, or rather impulse, to oppose. When that absorbs the mind, Cautiousness, unless it be also large, is, for the time, rendered inactive by the superior energy of a more powerful organ. If Cautiousness be larger, and Firmness be small, then fear will lead the way, and Combateness be overpowered. The bully will sink into the poltroon. If Destructiveness be large, the love of carnage will bear the palm from weaker Cautiousness; and if Firmness, Combateness, and Destructiveness be all large, while Cautiousness, Vitativeness, or, as M. Vimont would term it, the love of Self-Conservation are weak, there will be fool-hardiness, and a love of danger, because an uncontrollable desire for opposition and aggression. All of courage which is produced by Combateness, is the desire for a state of struggle, contest, resistance; which, when large, absorbs weaker organs which might otherwise keep it in check. To produce an undaunted man, there is required very large Firmness, to give what, in the flash circles, is called *game* or *bottom*. The former continues the struggle; the latter endures the punishment, and *dies hard*. Lord Falkland and Hampden, who, on opposite sides in the civil war, were for ever calling for peace, and yet were full of calm courage, seem to have been inspired only by Firmness, Self-Esteem, Conscientiousness, and, perhaps, Veneration. They are well contrasted with the Reformers, John Calvin and John Knox; whose punctilious pugnacity, and fastidious oppositiveness, demonstrated the hearty goodwill with which they grumbled, found fault, and carped at every thing that was done, complaining of all measures adopted by all parties. The Combateness of Melancthon, who endeavoured strenuously to defend Calvin for having burned Servetus over a slow fire, appears also to have been large.

The Irish, with small Cautiousness, large Hope, and powerful Combateness, take the primitive way of gratifying it by the onset of the shillelah; armed with which, they

“Meet with a friend, and for love knock him down.”

The Scotch, with as large Combateness, have less Hope, and more Cautiousness. Avoiding fisty-cuffs, they take to a war of words, become the most vehement schismatics, and fight behind the stockade of mere opinion. The true Irish all concur in religious opinion, are Catholics, and evaporate all Combateness in a *row*. The descendants of the Scotch in the North of Ireland, have a different sect for every hundred of the inhabitants, and they never fight.

The statues of gladiators, and of Hercules, manifest a large endowment of this organ; and from that it may be inferred, that sculptors have observed this protuberance to be a characteristic of pugnacity. In the heads of their female figures, this organ is represented as deficient, in strict accordance with the mental manifestations. But Christina, queen of Sweden, the only child of the famous Gustavus Adolphus, who was born when her father had been for some time in the very midst of his wars, resigned her throne that she might adopt the manners and dress of a man, and she accordingly fought duels, and murdered her secretary. So of Verulana Gracilia, mentioned by Tacitus, and many others.

Great liability to anger seems to arise from the combination of this organ with Destructiveness. When the latter only prevails, there is not so great a *susceptibility* of wrath, although it will be as violent when it occurs. A habitual scold possesses a considerable share of this desire. Coexisting with powerful Benevolence, the individual is liable to be excited upon the least appearance of cruelty; to be the champion of the oppressed; a universal undertaker of the cause of the weak against the strong. Wanting this organ, Benevolence would pity, but could not relieve; and Justice might be grieved with the wrong, but would not step forward to redress it.

correct in his definition of Concentrativeness, they seem, for the time, to throw that organ out of exercise altogether, by neglecting to hold constantly before them certain axioms of the science, which must measure all their definitions before they can be admitted even to further inquiry or attention.

All Propensities have some object which they desire or love. When they are active, they are pleased, delighted, or gratified, by the possession of the object, or the attainment of the desire; they are disagreeably affected by being denied its possession or realization. Now, the propensity of Destructiveness must have an object, and its accomplishment must produce an agreeable state of the organ. The description which has been generally given of its *modus operandi*, seems to be confined to its disagreeable state, as if that were its proper or legitimate function. Anger, fury, murder, may be states of Destructiveness, but surely cannot be its object or desire, which is for agreeable excitement, not for sensations which are the least desirable of all. A propensity must also, to be an independent and original faculty, act alone, and not merely exist as a consequent state of a predicament of the other faculties. Having premised these observations, we shall now proceed to detail the phenomena of Destructiveness, and thereafter investigate its ultimate function.

Writers upon this subject, have generally indulged in some preliminary reflections upon the subject of all animated nature being in a state of war. There are birds and beasts of prey: the lower creation live by devouring each other. To enable them to do so, it is said to be necessary that they should possess a propensity, or desire, to kill the objects which constitute their food. We are by no means convinced of this. The domestic fowls, which live largely on worms, flies, and other insects, do not kill them, but swallow them as they are. The aquatic birds, and all fishes, swallow their prey as they snatch it, devouring it alive, if it will go down in one mouthful, and only biting it if it be too large to swallow all at once. Over the greater part of the world, man and most other animals live on vegetable diet; and when he does take meat, there is not manifested the slightest love of killing; but, on the contrary, so great an abhorrence for it, that the business is confined to a very few members of the community, who would at any time dispense with the operation, if they could. The beasts of prey and those birds which kill before eating their food, do so, because it cannot be taken whole; because it offers resistance to their insults, which it is necessary to overcome, and probably, also, because food to them is unhealthy so long as there is in it any life. These animals never eat their own species. There are others which, in a domesticated state, kill without eating. The dog kills the rat, mouse, cat, hedgehog, but does not eat them. Their effluvium excites in him, by a chemical process, some powerful antipathy. Most animals kill only when they are hungry; a conclusive evidence that they have no mere love of killing. Many of the *herbivori* attack all animals which present to them a formidable appearance, but never think of eating them. In them, the organ of Combativeness will always be found large. The eagle, when it makes its stoop, has no anger towards its victim, and manifests not the slightest pleasure. It takes it simply as its food. Dogs and cats have been put into the den of the royal eagle. It put its talons upon their neck, and stood looking around, while they were expiring under its grasp, without manifesting the slightest consciousness that it was doing more than merely holding a morsel of its food. The sudden growl or yelp of the tiger, or the dog, takes place only when they are opposed, or when their prey is outstripping them in the chase, and probably is the result of mere keenness and Combativeness. Still, it is very true that the organ called Destructiveness, is large in all animals that prey upon others, and kill their food before eating it. Vimont supposes that this propensity is that which gives the love of dismembering, or taking to pieces. The puppy, for example, tears asunder, and shakes into small bits every thing it can lay its teeth upon. Beasts and birds of prey tear their victim to pieces before eating it; the *herbivori* disengage the grass from the ground; and the *rodentia* reduce their food to small bits. We are not satisfied, that in the young this is any thing more than a method adopted by the perceptive faculties of disengaging one piece from another, as a means of producing death, and of facilitating the operation of eating. The serpent, which can swallow its victim whole, puts itself to no such trouble; neither does the crocodile. The owl swallows rats whole, and vomits the offals in a black ball. That it has nothing to do with the carnivorous instinct (if there be such a thing, which we much doubt), is plain, if it be granted that it produces anger, contention, and malice. The Esquimaux, who

live on nothing but animal food, are not cruel or irascible; while the Irish, who eat nothing but potatoes, are extremely prone to anger, and very sanguinary. What, then, is the function of Destructiveness? Before proceeding to this investigation, we shall give a sketch of the effects which are generally attributed to the action of this organ.

The child destroys every toy that is given to him; tears his book; and takes every thing to pieces. He strikes the table or the floor, against which he hurts himself; puts pins through flies, and hunts cats. Man strikes and destroys even inanimate objects; tears his own hair, and rends his garments. He likes to see executions. Forbes and Selwin attended all within their reach. A journeyman apothecary at Vienna, became an executioner; the son of a rich merchant, a butcher; and a wealthy Dutchman paid for the privilege of killing cattle in the markets; all from love of destroying. A fiddler confessed to thirty-four murders perpetrated from pure love of slaughter. Hundreds of such cases are omitted from want of room. A peculiar madness prompts persons by sudden impulse to destroy. Husbands tell wife and children to fly, because they crave to kill them. Mothers have cut off their children's heads; and lately a man strangled his whole family from no motive whatever. A servant girl, as she was called to the dining-room, felt an irresistible desire to set fire to the stacks in the farm-yard, which she accordingly gratified. Maria Franck, from no explicable motive, had fired no less than thirteen different houses in the town where she resided. "Behold," says Gall, "Caligula cutting out the tongues of innocent people, throwing them to wild beasts to be devoured, forcing parents to assist in the execution of their children, giving the unfortunate wretches their choice of the wheel or of the rack, and amusing himself with their agony; summing up his rage in one wish, that the Romans had but one neck that he might decapitate them at a single stroke; feeding wild beasts, kept for the shows, on living men; and whose strongest wishes were for famine, pestilence, conflagration, earthquake, and the loss of an army. Look at Nero poisoning Britannicus, murdering his mother and the husband of the woman he wished to violate; passing the night in the streets with a rabble of unbridled youths, fighting, robbing, and killing; sacrificing to his fury his own wife, Octavia, Burrhus, Seneca, Lucan, Petronius, and his mistress Poppea; setting fire to the four corners of Rome, and then ascending an elevated tower to enjoy the terrible sight at his ease, with the wish that he could see the whole world on fire; covering the Christians with wax and other combustibles, and burning them by night that they might serve for lamps; laying a plan to murder all the governors of provinces, all the generals of the army, all the exiles, and all the Gauls in Rome; to poison the whole senate at their meal; to burn Rome a second time, and at the same moment turn the wild beasts, reserved for the shows, into the streets, to prevent the people from extinguishing the fire." In all murderers this organ is found large. In Gottfreide, who poisoned her husbands, children, mother, and friends, it is marked with great prominence and distinctness. In suicides, it is generally very conspicuous; and in the skull sketched at the end of this section, of a burglar who signalled his many robberies by cruel violence, it is enormous.

In Britain every public place is shut up, except against that class of persons who, from being able to pay for admission, are presumed to have their propensities under command. Were the populace admitted, every thing would be destroyed; shrubs torn up, pillars chipped, statues broken, ornaments cut. The figures in public places have to be made of bronze, and the mile-stones are saved from mutilation, only by being made of cast-iron. Satire is traced to this organ. There is certainly nothing which delights the reading public so much, as cutting a book up, quashing an author, or applying the knout, as is now the phrase. Certain surgeons are said to be "fond of the knife," when Destructiveness is large. The organ prompts lawyers to fill their pleadings with cutting abuse of the character of the opposing litigant, and satire upon his arguments. Those divines, called wholesale dealers in brimstone, by one party; and by another, "*faithful and evangelical ministers*," who preach up the terrors of the law, and omit the hopes and promises of the Gospel—who gratuitously invent descriptions of that hell, and those torments, which are carefully concealed in the Bible, and for which they have not the slightest warrant in the Scriptures, are evidently incited by pure Destructiveness.* Dr. Chalmers shows that its function lies in a different

* "Still these are the same shrieks, the same groans, the same doleful cries, incessantly to be made by you, and the smoke of your torment shall still ascend for ever and ever; your bodies

direction. "It were difficult to compute," he observes, "how much we are indebted for the blandness and amenity of human companionship, to the consciousness of so many sleeping fires in readiness to blaze forth at the touch, or on the moment of any provocation being offered. It is thus that a balance is maintained, without which human society might go into utter derangement; and without which too, even the animal creation might lose its stability, and disappear. And there is a kind of moral power in the anger itself, that is separate from the animal or physical strength which it puts in operation, and which invests with command, or at least provides with defensive armour, those who would otherwise be the most helpless of our species; so that decrepid age, or feeble womanhood, has by the mere rebuke of an angry countenance, made the stoutest heart to tremble before them. It is a moral force by which the inequalities of physical force are repaired, and while itself a firebrand and a destroyer, yet by the very terror of its ravages, which it diffuses among all, were it to stalk abroad at large over the world, does it contribute to uphold the pacific virtues among men." This author and Bishop Butler, admit Destructiveness to be an animal instinct. A thousand other modes of activity of this organ present themselves, but having explained the general principle, the reader can easily apply it to particular cases for himself.

Mr. Robert Cox, as we have already observed, has found that whenever any of the other faculties are in a disagreeable state, this organ of Destructiveness is aroused, and whenever they are gratified, they are as certain to excite the organ of Benevolence. This is not the place to criticise with minute precision the many arguments and facts which he adduces in support of this position, from many of which we altogether dissent. But we consider them extremely valuable, and supported with great ability. They are valuable on this account, that they show very distinctly how all prior writers have mistaken for the pure and independent action of Destructiveness, its excitement consequent upon, and in connection with, a peculiar and disagreeable state of the other faculties; and that, therefore, many of the articulate acts which are traced solely to this propensity, are performed under the guidance of other faculties. In short, the direction which the various predominant and depressed organs give to Destructiveness, has been mistaken for the legitimate function of that propensity itself. We feel assured, in particular, that its action has not been separated with sufficient care from that of its neighbour, Combativeness, which is seldom to be found small, when Destructiveness is large.

In the meantime, we remark, that according to Mr. Cox's theory, Destructiveness is only active when the other faculties are in a state of disagreeable or depressed excitement, and that it is manifested in the shape of bitterness, anger, and rage, or malice. A physiological fact connected with this circumstance, it is of much importance here to notice. Mr. Grattan of Belfast, in narrating the case of a patient, observes: "A most extraordinary peculiarity in this gentleman's head, is the existence of two fissures in the skull, having the appearance of the fontanels in children, as if there had been an absorption of the bone, but lying, as far as I could learn from mere description, the one on the left nearly over Veneration and part of Firmness, and that on the right across part of Conscientiousness and Hope; and I am positively assured by his daughter, that his clerks could at any time tell when he was angry, without hearing him speak, or seeing his face, but simply from the great depression

which shall have been *burning and roasting* all this while in these *glowing flames*, yet shall not have been consumed, but will remain to *roast* through an eternity yet."—*President Edwards*.

"The *Lamb of God* shall *roar* as a lion against them; though sometimes the righteous man did weep in secret places for their pride, and because they would not hear; yet then he shall rejoice when he seeth the vengeance; he shall wash his feet in the blood of the wicked. No pity shall then be shown to them from their nearest relations; the *godly wife* shall applaud the justice of the Judge in the condemnation of her *ungodly husband*; the *godly husband* shall say 'Amen' to the damnation of her who lay in his bosom; the *godly parents* shall say 'Hallelujah' at the passing of the sentence against their *ungodly child*; and the *godly child* shall, from his heart, approve the damnation of his wicked parents, of the father that begot him, and of the mother who bore him!"—*Boston's Fourfold State*.

"Tempests of angry fire shall roll
To blast the rebel worm,
And beat upon his naked soul,
In one eternal storm."—*Dr. Watts*.

which on such occasions occurred in these fissures, or, as they termed it, the holes that would appear in his head; and that she has at different times observed the same phenomenon herself." "The depressions remained so long as he was under the influence of passion, and as it subsided, the depressions gradually disappeared." Mr. Cox has spoken in general terms of the disagreeable affection of the other faculties exciting Destructiveness; but, upon referring to the various examples which he adduces, all that can be gathered from his statement, is, that when other organs are depressed, *Destructiveness is disagreeably affected also*; a fact that may be predicated of all the rest of the faculties, and that too, for the simple reason, that the mind cannot be in an agreeable and disagreeable state at the same time. When Hope is disappointed, all the faculties sympathise in the disagreeable affection, and therefore, it is not singular, that Destructiveness should share in the depression, and anger should be the consequence. But be it remembered, that this, and all other organs, must have an agreeable, as well as an unhappy state; and this pleasant sensation, anger is not. Pleasure is the end of existence, and the natural functions of all organs must therefore produce gratification, not unhappiness. Hitherto, every manifestation of Destructiveness which we have instanced, has been disagreeable in its sensations; and therefore, are we of opinion, that the general conception of the function of this organ, is in truth, merely a description of its state of pain or disappointment.

"Destructiveness," observes Mr. Combe, "has been regarded by some Phrenologists as communicating a more general energy to the mind. Endeavouring to trace analytically the manner in which it produces this effect, they have supposed it to give an impatient craving appetite for excitement; a desire to vent the mind, as it were, on something; a feeling which would be delighted with smashing and turmoil, or with any irregular commotion, rather than the listlessness of repose; and hence, a large developement of it is supposed to be incompatible with that drowsiness of disposition which dreams life away in vapid inactivity, is content to accept absence of suffering for enjoyment, and feels pain rather than pleasure in excitement. In this view, it is supposed to give a general stir and impetus to the mental faculties." Now, in our apprehension, if the general cerebral system require an arch-agitator of this kind, it must possess an organ, and that organ must be Destructiveness. The depressing passions, or rather a depressed state of the passions, has no natural or prescribed remedy. The mind may go down to the very depths of grief or despair, and by that means the patient may turn mad or expire. Life may become an insufferable burden, and it may "go so heavily with the disposition, that this brave overhanging firmament, may appear nothing but a pestilent congregation of vapours." The pride of Self-esteem humbled, the individual will begin not to respect himself, and go with "doublet all unbraced." Love of Approbation wounded, ambition will no longer raise the clear spirit to live laborious days. Acquisitiveness robbed, will sit with its hands across, and work no more for gold, its god. Continue the depression, and the individual will gradually become a moping and melancholy lunatic, without thought, object, or desire. The blood circulates languidly through the brain; it is deteriorated in quantity, and depraved in quality; the eyes become hollow; the face pale; the looks haggard; and the cheeks bloodless, or supplied only with dark coloured blood. The fluid is perceptibly diminished, and, as in Grattan's patient, the fontanels exhibit two holes. If there be no proper remedy, the individual executes with sorrow a suicide, that he may be taken from a torture of depression worse than death. But there is a remedy. Depression excites disagreeably the organ which stimulates all the others; anger is produced; excitement brings back the circulation with rapidity and in abundance, and the mind is restored to its former health. Thus the melancholy man becomes better the moment he gets angry; and the deepest grief is relieved by a paroxysm of rage. If Combativeness be large, it is excited by sympathy with aroused Destructiveness; and hence, the anger evaporates in opposing by fighting, striking, or otherwise injuring the object which has depressed the other faculties. Depression of all the organs, finds this mode of relief. Self-esteem is in the dust until an adversary is humbled, and then it is pleased. Acquisitiveness is in despair at a loss by bankruptcy; but when the mind disburdens itself of many oaths at the debtor, the mind resumes its tranquillity. Zanga's anger is gone the moment Alphonso falls. It is, indeed, quite true, that the emotion of Destructiveness, in its abstract shape, is an undefined anxiety for excitement, or mental activity in some shape or other; a love of consciousness, of force, of action.

Hitherto, the action of the organ has been considered in its relation to others; but it cannot be primitive, unless it act by itself. There is, common to all the emotions traceable to it, one principle, which is a desire or love of excitement—of satisfaction to the full, and in excess, of the whole mind and frame. May it not be a propensity for contrast—for extremes—for antipathies? All these may probably be reduced to the elementary feeling of a desire for change. The whole theory of the universe is based upon the existence of two grand features, motion and rest—*inertia* and attraction—permanency and mutability. There is a continual tendency in matter to stop, and a counteracting motive force. Stagnation leads to miasma; and the moon must make waves, else would the sea produce universal death. Were animal matter not to undergo instant changes into new creatures, the noisome effluvia of the dead would destroy the living. The human mind is evidently in the same state. Cautiousness that loves rest, and Concentrativeness that desires sameness, if not counteracted by a panting after action, excitement, or change of object or state, would stagnate the whole principles of exertion, and wear out the system in the operation of individual feelings. Were there no proneness to novelty, there would be no prompter to that healthy exercise of all the organs, or those new modes of activity, which are so necessary, not only to preserve reason, but even to the production of improvement in any of the conditions of civilised life. Were this not counteracted by a desire for tranquillity and permanency, there would be no sufficient study of one subject to enable the individual to attain any degree of perfection.

The production of effect, which seems to have been the ruling motive of Nero's and Caligula's conduct, is, in truth, but the endeavour to create some mighty change. Had Benevolence been large, the direction of this desire would never have been towards cruelty. But Benevolence absent, there is no more absolute means of producing a great change or effect upon the minds of the sufferer and human spectators, than to inflict cruel tortures. The infant endeavours, in its opening Destructiveness, which is enormously large, to make as much noise by speaking, striking the table, and so forth, as it can. A child gets a toy. Its novelty pleases Destructiveness, but when it is no longer new, it is taken to pieces or thrown into the fire. Men have been known, willingly to sell their own lives, for the purpose of killing some great man, as a king, or a prime minister; because it changed the policy of a whole nation. It may, with Order and Ideality, be even detected in that constant craving for the extermination of dirt, which may be seen in housekeepers of much energy. They are disagreeably affected, even by the most perfect arrangement, if it be continuous. They, therefore, shift the position of every thing; alter the places of the pictures, chairs, or tables; make the parlour the sitting-room one month—the dining-room the next; and re-arrange all, from the pure love of change. Those animals which exhibit the most untameable and ferocious disposition, are uniformly remarkable for their restlessness. They continually change their position. There is nothing which irritates some persons so much, as that which provokes the exclamation,

“The fellow hath damnable iteration!”

Some persons commit suicide simply from the *tedium vitæ* arising from the recurrence of the unvarying round of their daily duties. There are none so irascible as those who are fond of novelty, and none so easily pleased by simply gratifying the desire. The Hindoos, deficient in Destructiveness, have changed so little, that they have lived in the same castes from father to son, from the time when first noticed by Xenophon to the present hour. Those savages who are most ferocious, are exactly those who are fondest of novelty, and least settled. The Athenians, whose love of “some new thing” was so conspicuous, were bold and cruel. They put to death their greatest men, merely because they were tired of them; banished Aristides, because it was monotonous always to hear of his justice; condemned Socrates to be poisoned; and immediately afterwards killed his poisoners. Reformers or changers of present laws, are termed “Destructives;” and the English mobs burn houses or towns, simply from some undefined expectation of a change. The French, who are proverbially *cupidi novarum rerum*, possess large Destructiveness, and have ever been fond of war. Their revolutions are never-ending, bloody, and cruel. Napoleon understood this so well, that he was compelled to change the fashions, to make illuminations, to declare war, and erect monuments, or rob other countries of their works of art, in order that novelty might evaporate the superabundant Destructiveness of the nation. In the

first revolution, the children were taken to executions by their nurses, as a forenoon recreation; the people changed their names, their offices, their days, the titles of the months of the year, their religion, and their very God. They were unhappy if anything whatever was the same as before. They even got tired of murder itself. Up to this hour they have followed after new changes, without object, aim, or end. *Ennui* is the most fruitful source of fretfulness, anger, mischief. Good temper in nations, as in individuals, is always secured by novelty.

If we suppose the desire of change, either in circumstances, situation, or thought, in things external, or in the mode of action of the various organs, to be the legitimate use and function of Destructiveness, and anger to be its disagreeable affection, we can easily see that a man may possess a large developement of this faculty, and be by no means cruel or irascible. If he have the depressing passions in small endowment, or if he have large Hope and Benevolence, with only ordinary Cautiousness, and fair Combativeness, he will never be depressed; the other feelings will not be disagreeably affected; and thus the propensity which produces a change in the low state of the organs, will not be excited in the shape of its depressed form, which we have seen to be anger. With good health added, the individual will be gay, volatile, and pleasant; for ever on the *qui vive*, and always prepared to receive with avidity every novelty which presents itself for his gratification. He may be apt to fret a little at monotony, although that can seldom occur to a mind which can extract new features from the tamest countenance. If his Destructiveness be small, and the organs of gaiety large, the individual will be happy in the dullest and most tedious circumstances, enjoying all with tranquil placidity. If Cautiousness, Self-Esteem, Love of Approbation, and Acquisitiveness be large, with small Hope and Combativeness combined with feeble Destructiveness, there will be no anger to produce a change from the depressed state of the brain to rapid and healthy circulation, and the individual will become moping, listless, melancholy, and an idiotic maniac. If these first-named organs be large, and Destructiveness also very powerful, then their disagreeable excitement will produce the same state in Destructiveness, and the individual may go through all the stages of fretfulness, craving for effect, gnawing passion for excitement, anger, malice, rage, and fury.*

Of course, this hypothesis is in the meantime only suggested for farther inquiry, and is not to be assumed as taking the place in our mind of settled conviction.

In the skull sketched below, this organ is developed in a high degree. It is that of a chief of a band of robbers, remarkable for his cruelties and numerous murders. The moral region is very nearly obliterated. This man must have been an idiot, in so far as any ideas of virtue or accountability were concerned. He was only fit for the woods, and the society of the very lowest order of savages.



SECTION III.—*Alimentiveness.*

THAT the desire for Food is in the mind or brain, not in the stomach, is a proposition which is very startling, and yet, upon consideration, very plain. A desire can be nowhere but in the mind. It is the man, not the stomach, that loves nutriment;

* Where general depression is caused by impediment in the circulation, as in diseases of the heart, irritability, anger, and sudden bursts of unaccountable fury, are the result. A child of five years of age, under this complaint, had periodical fits of rage, in which it was excited to the most dreadful imprecations. This was probably a remedy of nature to recall activity in the cerebral circulation, and through that in the whole system.

it is the mind that feels hunger, and craves to relieve it. The mere conception of disgusting food excites nausea. To invalids, the sight of rich meat, without tasting or smelling it, produces faintness. The bare *idea* creates the effect, and ideas are mental. When the stomach cannot receive or retain aliment, hunger is powerful. The infant sucks on long after it has begun to reject the milk. In inflammation, the patient feels a keen appetite, but the food is thrown up the moment it is swallowed. When we feel no hunger, the bare sight of food whets the appetite. When we grieve, we are no longer hungry. If we are about to discuss a hearty breakfast, and receive bad news, we can no longer eat. It is surely not the stomach that grieves! Hard study produces the same result. The stimulus is attracted to, and monopolised by, the organs of the intellectual faculties, and that part of the brain where the love of food is situated, is drained of its resources. But, if it were the stomach that felt hunger, it would desire to be filled whenever it was empty. It could not discriminate tastes till it had received the aliment, even assuming that the stomach can make its election of meats; and thus, the individual would have swallowed them before the belly had decided upon their acceptance or rejection. In the celebrated case reported by Dr. Gairdner of Edinburgh, a patient who had cut his throat, was perceived to secrete saliva whenever he *saw* food. The impression made on his mind, stimulated at once the appetite and the organs of salivary secretion, as was apparent by the spittle oozing out at the aperture of the wound in his throat.

But the most conclusive proof of the mental character of this desire, is the fact of the existence of an idiosyncrasy of appetite. Some persons are gluttonous, others abstemious, some drunken, others sober, some peculiar for quantity, and many for the quality of their aliment. This, too, is altogether irrespective of the capacities of the stomach, or of their powers of digestion. In those who exceed greatly in the pleasures of the table, it has been observed that a particular portion of the brain is largely developed. "The place," observes Dr. Hoppe, "where its different degrees of developement are manifested in the living body, is in the *fossa zygomatica*, exactly under the organ of Acquisitiveness, and before that of Destructiveness." Broussais and Vimont, consider it to be farther forward, and lower down. "It is concealed," says the former, "under the temporal muscle, and sensibly enlarges the head at that region, *below the organ of Constructiveness*, and in front of that of Destructiveness." "This organ," observes the physician who reports a case in Edinburgh Infirmary, which we shall afterwards notice, "is nearly parallel to the zygomatic arch, which is often rendered prominent by it when large; but the distance of the arch from the proper *parietes* of the skull being variable, this is not a certain guide. The temporal muscle opposes an obstacle, but may itself be used as a means of removing the difficulty in part. When the organ is larger than its neighbours, the lower part of the temporal muscle is pushed outwards, making it appear as if lying on a pyramidal, instead of vertical sided cranium, the base of the pyramid being downwards; when small, the reverse occurs. If the organ be very large, it will affect the socket of the eye-ball, pushing the latter up and forward, not as in Language, down and forwards. When both are large, the eye looks imprisoned by a fulness, extending all round it." Being a faculty of the lowest kind, it was to be expected that it would be placed at the base of the brain. The direct evidence in favour of the organ is very strong.

A patient in the Edinburgh Infirmary, awoke at six craving for food, and ate continually until twelve. *Although his stomach was greatly distended, he complained that he was dying for hunger*; became delirious, and then nearly insensible, crying only "Hunger! hunger! it's hunger!" He complained of a pain at the organ of Alimentiveness, but nowhere else. A patient of Messrs. Ombros & Penthelite, having exactly the same insatiable voracity, was bled with leeches at the seat of the organ, by Spurzheim, and instantly relieved. In a woman mentioned by M. Descuret, whose skull is in his possession, this organ is twice the natural size. She ate the rations of from fifteen to eighteen of the inmates of the Salpetriere, and when expelled, took every method of stealing bread and meat. Being stopped in this, she betook herself to raw vegetables, and devoured all the plants and roots that presented themselves to her; but having surfeited herself with noxious herbs, particularly some of the *ranunculus* tribe, excessively acrid and irritating, she was killed. "Every one is aware," says Vimont, "that gluttony is the peculiar vice of infancy. I have examined the heads of forty-eight children; # from five to twelve years of age, and can testify, that in the whole this organ is very apparent." "It is enormously developed

in the skulls of two women which are in my collection. They were incurably addicted to spirits." A woman was seized with a fit of voracity, when, in consequence of a violent fright, she felt the blood rush up to the head, and leave the extremities. In three cases of death from long intemperance, distinct erosions of the two convolutions of Alimentiveness, were observed by the surgeons in the Hospice de la Charité. In two others (a town-crier and a juggler), the same propensity was accompanied with the same result. We know a person, who is frequently attacked with *delirium tremens*, in consequence of hard drinking, in whom the left side of the head, at the region of this organ, is so enormous as to produce a remarkable deformity. In two girls, Vimont found this organ very large. The one ate plentifully of cinders, and the other unground wheat, drinking quantities of the sourest and strongest vinegar. In a woman, who from infancy ate very little, and when an adult, confined her diet to water or a little milk, this organ is very small, and the temporal bones much sunken. In Charles XII. who forswore wine, and tried to live without food, the organ is also very deficient. The Germans and Americans, who are much addicted to drinking and eating, are equally singular for their passion for smoking. The organ in them is very marked. Snuff and tobacco are substitutes for food, and the habit of taking a pinch or a quid, probably has its origin in active Alimentiveness. Persons smoke, snuff, or chew most, when this organ has been stimulated by eating or drinking; and excess in both generally go together. Few habitual snuffers, or opium or tobacco chewers, are indifferent to the charms of a flowing bowl. Drunkenness is hereditary, from which it is certainly to be inferred, that it proceeds from an innate principle or desire. That hunger and thirst proceed from the same faculty, is rendered probable by the fact, that drinking excites a false appetite.

"Vicit digna viro sententia: noverat illo
Luxuriam imperii veterem noctesque Neronis
Jam medias aliamque famem cum pulmo falerano
Arderet."—*Juv. Sat. IV. l. 136, et seq.*

Drink having a tendency to increase the flow of blood to the brain, stimulates it, and particularly the organ which produces the love of it. Hence it is, that each tumbler excites a greater inclination for one more. The habitual stimulus which the drunkard gives to this organ, has the effect of transmitting a tendency to overaction in children born during the period of indulgence in this brutal habit. Accordingly, the offspring are extremely voracious; and we have seen them consume quantities of acrid food, which adults of even a copious appetite could not equal.

The excitement of this organ, produced by fasting, stimulates those which surround it.

"He had not dined.—
The veins unfill'd, the blood is cold, and then
We pout upon the morning."

It also rouses the Destructiveness of the lion. The dog, while eating, is more apt to bite, and the horse to kick. "I'll go see if the bear be gone from the gentleman, and how much he hath eaten; *they are never cursed but when they are hungry.*" Acting upon its neighbour Secretiveness, it produces that extraordinary concealment of eating for which some women are so remarkable. Mr. Simpson found the organ large in a young gentleman who had periodical fits of inordinate voracity, accompanied by an irresistible propensity to steal everything within his reach. In combination with Acquisitiveness, it may prompt the bee, ant, and beaver, to hoard their food. Persons who steal, or who commit riots, plead drunkenness in mitigation of punishment.

With regard to the exact function of this organ, many conjectures have been hazarded, in which accurate philosophy has been entirely overlooked. Some have supposed it to produce taste or appetite, in contradistinction to mere hunger; while others deem it the faculty which enables each animal to discriminate the food peculiarly fitted for its constitution, and to reject what is unwholesome or poisonous. To us it appears plain, that appetite is just an enlarged sense of hunger. We conceive, that a communication exists betwixt the brain and the belly, in the shape of nerves, which proceed from the organ of Alimentiveness to the stomach. When the latter is empty, it is probable that the end of the nerve is irritated, and stimulates the former, and produces the sense of hunger. But when the stomach is filled, the

sense still exists, because the organ which produces the sense is still unsatisfied. If the organ of Alimentiveness were that whereby animals were enabled to choose the food fitted to their constitution, and to avoid poisonous substances, it would possess a discriminating and intellectual, not a merely animal function. Besides, wherever it was largest, the power of choice would be greatest. But this is just the reverse of the fact. The infant possesses it in enormous endowment, yet cannot discriminate one substance from another, and will take poison readily. The shark, whose voracity is proverbial, has no sense of taste, but swallows whatever it sees before it in the water. The woman mentioned by Broussais, as labouring under an acute state of inflammation of this organ, was so little capable of choosing betwixt aliments, that she poisoned herself on a ranunculus. And *there is no difficulty whatever in poisoning any animal*; set down noxious food, and it will be immediately consumed by dog, cat, rat, cow, horse, hog, or bird. The whole hypothesis is, therefore, a plain absurdity. Animals, like man, derive a knowledge of their proper nutriment by experience. As man seldom poisons himself, in consequence of his taking the precaution to adopt an active exercise of his perceptive faculties in detecting what hurts and what benefits the constitution, so the lower animals, by the same process, escape poison. They also teach their young to select proper nutriment, feed them, unfold food to their eyes, cry to them to approach it, and show them an example. The constitution of their palatic nerves, their organization in teeth and claws, their olfactory senses, climate, and situation, do the rest. It would be about as rational to expect an organ of flight, of tearing, or cud-chewing, as of alimentary discrimination.

The discovery of the function of this organ, is calculated to be of the utmost benefit to society, and especially in the direction of education. From its known phenomena we may observe, that the sensations of hunger and thirst proceed from the action of the same organ; that, therefore, gluttony and drunkenness are derived from the same source; and that, if the organ be stimulated by food, and tempted by racy condiments, it may proceed to that state of inflamed action which produces the sot and drunkard. By this we learn, also, that the easiest method of educating a child to future debauchery, is to tempt, pamper, and inflame Alimentiveness with food to any greater than a most moderate extent, either in quantity or quality. We are also taught by this analysis, that we ought no more to give others or ourselves, as much as they or we incline to eat, than we should permit our Destructiveness to put us in a rage, or Acquisitiveness to pick pockets. The appetite of hunger and thirst being a mental desire, and not a mere craving of the organic system, cannot be infallible in its objects or indulgence, any more than that of the other passions. Hence the desire is capable of being educated, castigated, and put under complete control of the intellect, so that we can produce, by the simple training of the cerebral part, enduring abstinence, and a permanent natural temperance and moderation. The insensibility, irrationality, and evil concupiscence, which result from drunkenness, being caused by over-stimulating Alimentiveness, and irritating thereby the neighbouring organs sympathetically, it follows that an abuse of the organ by gluttony, will create over-action also, and thus, in the same manner, excite the action of the neighbouring propensities, Destructiveness, Combativeness, Amativeness, and Acquisitiveness. A Temperance Society for Eating is, therefore, as loudly demanded as one for Drinking.

That this organ has been grossly neglected in education, and demands universally in civilised society a great deal more indulgence than is necessary either for sustenance or health, is illustrated by the fact, that if we gradually diminish our diet, we at last cease to have any inclination for even so much as one-half of the food which we formerly deemed absolutely necessary for support; while, at the same time, we discover that our strength is as great as, if not greater than, ever it was before. In the Indian Journal of Medical and Physical Science, it is recorded that a man in India, by long practice, "acquired the art of holding his breath, by shutting his mouth and stopping the interior opening of his nostrils with his tongue; he also abstains from solid food for some days previous to his interment." "The place in which he was buried at Jaisulmer is a small building about twelve feet by eight, built of stone; and in the floor was a hole about three feet long, two-and-a-half feet wide, and the same depth, or perhaps a yard deep, in which he was placed in a sitting posture, sewed up in his shroud, with his feet turned inwards towards the stomach, and his hands also pointed inwards towards the chest. Two heavy slabs of

stone, five or six feet long, and broad enough to cover the mouth of the grave, so that he could not escape, were then placed over him, and I believe a little earth was placed over the whole, so as to make the surface of the grave smooth and compact. The door of the house was also built up, and people placed outside, so that no tricks might be played, nor deception practised. At the expiration of a full month, that is to say, *this morning*, the walling of the door was broken, and the buried man dug out of the grave; Trevelyan's moonshee only running there in time to see the ripping open of the bag in which the man had been enclosed. He was taken out in a perfectly senseless state, his eyes closed, his hands cramped and powerless, his stomach shrank very much, and his teeth jammed so fast together that they were forced to open his mouth with an iron instrument, to pour a little water down his throat. He gradually recovered his senses and the use of his limbs; and when we went to see him, was sitting up supported by two men, and conversed with us in a low gentle tone of voice, saying that we might bury him again for a twelvemonth if we pleased. "*Previously to his interments he takes milk only, and of that, no more than is sufficient to support life.*" This case establishes beyond a doubt the capability of the appetite to be trained and educated. It shows that the patient, discovering by experience that a gradual diminution of the stimulus which the cerebral organ generally received, in the same ratio decreased the desire for aliment, lessened the supply of the food which gratified the appetite, until at last the craving of hunger ceased altogether. If a man who does nothing can live for a month without food, it is clear that the idle gentleman can never require five meals every day. The only reason why men die so soon of hunger, is, that the organ of Alimentiveness in their case is not gradually trained to abstinence, but that the objects which gratify a ravenous appetite are removed all at once. Hence madness is so often the result of starvation.

SECTION IV.—*Love of Life.*

"To take care of one's self," says M. Vimont, "is an innate feeling which belongs to all animals. All functions, in the ordinary sense of the word, doubtless contribute to the preservation of the race; but the expression is employed here in a much more limited sense, to indicate a mode of action of the cerebro-nervous system, having all the characteristics of a fundamental faculty; it consists in my opinion, in an impression purely instinctive, which induces animals to take to flight, or to be upon the watch, when any appearances from without seem to threaten their existence. This faculty is one of those which manifest themselves very early. I am inclined to think, that it is to this, to which ought to be referred the cries of the new-born infant, and those of the young of other animals, when any strange object alarms them. It is the sudden disappearance of certain species of animals upon the slightest noise, or on the presentation of any object seen for the first time, which has suggested to me the idea, that their manner of proceeding in such cases, depends on some fundamental faculty. I have seen foxes, rats, mice, and cats, disappear like lightning, upon the approach of a strange person or noise." "At the commencement of my inquiries, and for long afterwards, I supposed that the conduct of these animals might be explained by the assumption of a considerable development of one or two faculties (Secretiveness and Cautiousness), of which I shall speak afterwards, but numerous observations conspired to destroy this supposition. I have found by ample experience, that animals deficient both in Cautiousness and Secretiveness, will scarcely suffer themselves to be approached, and have a singular tendency to run away or otherwise preserve themselves." He then proceeds to state, that the result of a great number of observations and experiments, has been to convince him that there is an instinct of *Conservation*, the cerebral organ of which is situated in the hollow at the side of the head, immediately above the sphenoid bone. "Observations," says Beaussais, "have been made upon suicides. It has been found that those who kill themselves without hesitation, have this part of the brain extremely depressed. M. Dumoustier has gathered a sufficient number of facts upon the subject, to warrant him, as he thinks, in stating, that the organ is feebly developed in gratuitous suicides, and remarkably protuberant in those whose whole thoughts run upon self-preservation; who are profound egotists, and are occupied only with themselves." In an old

artillery-man of Val-de-Grace, who exposed his life most recklessly in never-ending duels, presented by Dr. Gaubert to Vimont, the latter found the organ of Conservation not only very narrow, but extremely shallow.

"The organ," says Mr. Combe, "is probably situated in the base of the brain. The only fact tending to illustrate its position, is one observed by Dr. Andrew Combe, and recorded in the *Phrenological Journal*, vol. iii, p. 471. In describing the dissection of the brain of a lady upwards of sixty, who for many years had been remarkable for continual anxiety about her own death, he observes, that the enormous development of one convolution at the base of the middle lobe of the brain, the function of which is unknown, was too striking not to arrest our attention; it was that lying towards the mesial line, on the basilar and inner side of the middle lobe, and consequently of Destructiveness. The corresponding part of the skull showed a very deep and distinctly moulded cavity or bed, running longitudinally, with high and prominent sides, and presenting altogether an appearance much more striking than in any skull I ever saw. From the situation of this convolution, its development cannot be ascertained during life, and hence its function remains unknown. Whether it may have any connection with the Love of Life, is a circumstance which may be determined by future observations: all that we can say at present is, that the Love of Life seems to be a feeling *sui generis*, and not proportioned to any faculty or combination of faculties yet known; that in the subject of this notice, it was one of the most permanently active which she possessed; and that in her, the convolution alluded to, was of very unusual magnitude."

We forbear offering any opinion on this subject, until farther light has been thrown upon it, by more careful analysis and more extended observation.

SECTION V.—Organ VII. Secretiveness.

IMMEDIATELY above the organ of Destructiveness, is situated that of Secretiveness, which extends perhaps slightly farther forward than the former. Like it, the size is to be judged of mainly by its lateral projection outward from, and beyond the ears. It is developed in at least average endowment, if, in a head of 22½ or 23 inches, it measure by the callipers six inches.

Although metaphysicians, in order to fit the human mind to their theories, and to reduce its elements to a so-called philosophical simplicity, which was not to be found in nature, have denied the existence of a primitive propensity to cunning,—the men of the world, and the poets, who are the real metaphysicians, and the true and accurate observers of mankind, had long been familiar with an inherent principle of this description. Indeed, there is nothing that on the face of society strikes us as more remarkable, than the extreme difference of character in this respect.

Of some men it may be said, that their minds, as well as their hearts, are always at their mouths. They conceal nothing, they suppress nothing, they think aloud, their mind is seen, as watchmakers exhibit the works of a clock, through a glass-case. They may be said to be transparent. There is not a dark, or even a shaded corner in their whole being. Of these, it is currently phrased, that when you see them once, you see them altogether. They are remarkable for simplicity of character, especially if they add considerable Wonder to their deficient Secretiveness. They can see nothing in what is done, except what is apparent on the surface of it. They take it for granted, that others mean what they say; they do not understand, or infer the existence of even a shade of thought beyond what the words spoken ordinarily express. They are literal, unsuspecting, unguarded. Their mind seems to proceed upon a sort of Hamiltonian principle, that never thinks of a free translation of other men's actions or language. They are blind to everything but the obvious and the palpable, and are deficient in what is called *savoir faire*, or tact. You may speak at them for an age, without their comprehending you. You may hint, but hints are not made for such men. You may insinuate, but they neither hear nor see anything except the plain and obvious appearance of things. Such persons have no more idea of finesse, policy, diplomacy, intrigue, than if these words were not representatives of most important thoughts.

The reverse of this picture is a great deal more common in British, particularly in Scottish society. In the national head, the organ of Secretiveness is generally large.

"The nature and objects of this propensity," observes Mr. Combe, "appear to be the following:—The various faculties of the human mind are liable to involuntary activity, from internal causes, as well as from external excitement. Thus, Amativeness becoming active, gives feelings corresponding to its nature. Acquisitiveness inspires with strong desires for wealth; and Love of Approbation fills the mind with projects of ambition. . . Every one will be conscious, that these, or similar feelings, at times rush into his mind involuntarily, and frequently refuse to depart at the command of the understanding. If outward expression were given to these impulses, in all their vivacity, as they arise, social intercourse would be disfigured by a rude assemblage of disgusting improprieties, and man would shun the society of his fellows, as more loathsome than pestilence or famine." "Some instinctive tendency, therefore, to restrain within the mind itself, to conceal, as it were, from the public eye, the various desires and emotions which involuntarily present themselves in the mind, was necessary, to enable the understanding to regulate their outward expression; and nature appears to have provided this power in the faculty of Secretiveness. It is an instinctive tendency to conceal, and the legitimate object of it appears to be, to restrain the outward expression of our thoughts and emotions, till the understanding shall have pronounced judgment on their propriety."

From such an hypothesis, it is not difficult to trace the part that this organ must play in all the tricks of genius. The dramatist or actor who would describe or personate Iago, must for the time dismiss all the opposing emotions or sentiments that check the free current of a consistent and unscrupulous villainy, and must give scope to the play solely of the worst affections of the heart. He who would enact Coriolanus, must cashier for the time a Cautiousness that in his real character is perhaps predominating, a Love of Approbation that is perhaps fed by the very applause elicited by the skill with which it is concealed, a Benevolence which is mayhap universally diffusive; and he must give free scope to a Self-Esteem that swells him to the self-conception of a demi-god—Destructiveness and Combativeness, which pant for the quenching of an unfleshed sword in Volscian carcases—an unbending dignity, and uncompromising and unflattering independence—that for ever feels but this, "I, by myself, alone!" The poet also must suppress all every-day thoughts, all commonplace details, all feelings that plead to keep him from the emotions or passions which constitute the peculiar mood in which he should be when the fit is on him. Imitation is no doubt necessary, to enable the actor, or poet, or painter, to conceive of, or outwardly to indicate the expression, form, palpability, and natural language of his emotions; but unless he possess large and powerful Secretiveness, he will exhibit no individuality, intensity, or sincerity of passion, which can only be manifested where all counter feelings are suppressed, and those only required for the occasion evoked in all their strength.

The possession of a principle which desires concealment, and gives a power to suppress the manifestation of emotions—which enables and prompts us to seem what we are not—which makes us hide what we do feel, and affect what we do not—which keeps under, almost against ourselves, the true sensations of the heart, and places others in their room; all this naturally leads the individual to the instinctive conviction, that in every man there is something that is not apparent—that the surface never exhibits the true nature of any object—that no man lays open his heart and its workings—that with everything that is said there is a reservation—that in every object in nature there is a hidden principle, which the outside or first presentation does not discover. Such a sense, so deep a conviction, gives the continued habit of suspicion—the constant tendency to detect the true principles of every object, to find out what is suppressed, to divine what is concealed, to discover what the surface blisters over. The use of such an organ is to be found in its application of a universal scepticism of the superficialities of all things. It prompts the chemist to the discovery of hidden principles in the properties of bodies—it suggests to the zoologist the watching of the habits of animals—it gives to the natural philosopher, as it gave to Newton,* the disposition to penetrate the ultimate principles of physics,

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From this inherent desire to conceal, necessarily proceeds a power to dissemble, which, misdirected, includes a tendency to insincerity, deceit, lying, swindling, fraud, and imposture. But in the hands of an honest man, it produces the capacity of outwitting a rogue, of penetrating into all his tricks—of countermining deceit—of diving into the very heart of every parson he meets in social intercourse; and, as if by intuition, separating the fair, downright, and candid, from the insincere, dishonest, and traitorous. Some persons have the power instinctively of detecting the natural language of hypocrisy. They fix their opinion of the character of individuals, and are never deceived. They can give no tangible reason for their dislike, but they for ever keep their eye upon the object of their suspicion.

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They are always successful in discovering that the dislike is well founded. Their mind misgives them, and it misgives truly. Such persons have in their constitution a natural talent for diplomacy. It was this that enabled the unpractised Franklin to over-reach the most wily ambassadors of Europe. In his bust, the organ is largely developed.

Generals who are fond of stratagems, demonstrations, feints, pretended retreats, concealment of real strength, a show of front where there are almost no troops, ambuscades, pitfalls, &c. possess Secretiveness largely developed. The American Indian skull presents the same appearance as does that of King Robert Bruce; and it is certain, that neither the savages nor the king, ever did that by force which could be accomplished by stratagem. The organ is large in Napoleon, Wellington, and Nelson, who were singular for their penetration into the designs of others. It is essential to the lawyer in the examination of witnesses, and in feeling the pulse of the court or jury. Indeed, we feel convinced that the triumphs of the barrister who gains his reputation by jury causes, are to be attributed to a very great development of Secretiveness. We have verified the soundness of this principle by actual experiment. In those who are distinguished for exquisite tact in *drawing out* a witness, Secretiveness is always large. It is very necessary to the expert thief or pickpocket, producing both the faculty of concealment and the instinct of cunning. Of all the skulls of persons of this character, in the various phrenological collections, there is not one in which the organ is not considerable; and in Patch, who murdered his master, with so many circumstances of successful hypocrisy—in M. Gottfreide, who poisoned so many persons, and maintained at the same time so good a character—and, in general, in all poisoners and assassins, it is enormously large. No man can be a good police-magistrate, or Bow-street officer, who does not possess it almost in excess.

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"The nature and objects of this propensity," observes Mr. Combe, "appear to be the following:—The various faculties of the human mind are liable to involuntary activity, from internal causes, as well as from external excitement. Thus, Amativeness becoming active, gives feelings corresponding to its nature. Acquisitiveness inspires with strong desires for wealth; and Love of Approbation fills the mind with projects of ambition. Every one will be conscious, that these, or similar feelings, at times rush into his mind involuntarily, and frequently refuse to depart at the command of the understanding. If outward expression were given to these impulses, in all their vivacity, as they arise, social intercourse would be disfigured by a rude assemblage of disgusting improprieties, and man would shun the society of his fellows, as more loathsome than pestilence or famine." "Some instinctive tendency, therefore, to restrain within the mind itself, to conceal, as it were, from the public eye, the various desires and emotions which involuntarily present themselves in the mind, was necessary, to enable the understanding to regulate their outward expression; and nature appears to have provided this power in the faculty of Secretiveness. It is an instinctive tendency to conceal, and the legitimate object of it appears to be, to restrain the outward expression of our thoughts and emotions, till the understanding shall have pronounced judgment on their propriety."

From such an hypothesis, it is not difficult to trace the part that this organ must play in all the tricks of genius. The dramatist or actor who would describe or personate Iago, must for the time dismiss all the opposing emotions or sentiments that check the free current of a consistent and unscrupulous villany, and must give scope to the play solely of the worst affections of the heart. He who would enact Coriolanus, must cashier for the time a Cautiousness that in his real character is perhaps predominating, a Love of Approbation that is perhaps fed by the very applause elicited by the skill with which it is concealed, a Benevolence which is mayhap universally diffusive; and he must give free scope to a Self-Esteem that swells him to the self-conception of a demi-god—Destructiveness and Combaticiveness, which pant for the quenching of an unfleshed sword in Volscian carcasses—an unbending dignity, and uncompromising and unflattering independence—that for ever feels but this, "I, by myself, alone!" The poet also must suppress all every-day thoughts, all commonplace details, all feelings that plead to keep him from the emotions or passions which constitute the peculiar mood in which he should be when the fit is on him. Imitation is no doubt necessary, to enable the actor, or poet, or painter, to conceive of, or outwardly to indicate the expression, form, palpability, and natural language of his emotions; but unless he possess large and powerful Secretiveness, he will exhibit no individuality, intensity, or sincerity of passion, which can only be manifested where all counter feelings are suppressed, and those only required for the occasion evoked in all their strength.

The possession of a principle which desires concealment, and gives a power to suppress the manifestation of emotions—which enables and prompts us to seem what we are not—which makes us hide what we do feel, and affect what we do not—which keeps under, almost against ourselves, the true sensations of the heart, and places others in their room; all this naturally leads the individual to the instinctive conviction, that in every man there is something that is not apparent—that the surface never exhibits the true nature of any object—that no man lays open his heart and its workings—that with everything that is said there is a reservation—that in every object in nature there is a hidden principle, which the outside or first presentation does not discover. Such a sense, so deep a conviction, gives the continued habit of suspicion—the constant tendency to detect the true principles of every object, to find out what is suppressed, to divine what is concealed, to discover what the surface blisters over. The use of such an organ is to be found in its application of a universal scepticism of the superficies of all things. It prompts the chemist to the discovery of hidden principles in the properties of bodies—it suggests to the zoologist the watching of the habits of animals—it gives to the natural philosopher, as it gave to Newton,* the disposition to penetrate the ultimate principles of physics,

* Newton took nothing for granted, and admitted nothing to be merely as it appeared. He doubted, and questioned, and suspected his way into results no less marvellous than true. His madness took the turn of Secretiveness and Self-Esteem, giving rise to most unreasonable, but deep suspicion of all his best friends, particularly Locke. He conjectured plots, and suspected the professions of everybody.

and incites the moralist to probe the inmost workings of the human heart. Its effects upon ordinary character are never-ceasing, giving to the hypocrite the power of overmastering the severest scrutiny, and, to most men, the capacity of presenting a front of a totally different nature from their true sentiment.

From this inherent desire to conceal, necessarily proceeds a power to dissemble, which, misdirected, includes a tendency to insincerity, deceit, lying, swindling, fraud, and imposture. But in the hands of an honest man, it produces the capacity of outwitting a rogue, of penetrating into all his tricks—of countermining deceit—of diving into the very heart of every person he meets in social intercourse; and, as if by intuition, separating the fair, downright, and candid, from the insincere, dishonest, and traitorous. Some persons have the power instinctively of detecting the natural language of hypocrisy. They fix their opinion of the character of individuals, and are never deceived. They can give no tangible reason for their dislike, but they for ever keep their eye upon the object of their suspicion.

“Non amo te Sabidi, nec possum dicere quare—
Hoc tantum possum dicere, non amo te.”

They are always successful in discovering that the dislike is well founded. Their mind misgives them, and it misgives truly. Such persons have in their constitution a natural talent for diplomacy. It was this that enabled the unpractised Franklin to over-reach the most wily ambassadors of Europe. In his bust, the organ is largely developed.

Generals who are fond of stratagems, demonstrations, feints, pretended retreats, concealment of real strength, a show of front where there are almost no troops, ambuscades, pitfalls, &c. possess Secretiveness largely developed. The American Indian skull presents the same appearance as does that of King Robert Bruce; and it is certain, that neither the savages nor the king, ever did that by force which could be accomplished by stratagem. The organ is large in Napoleon, Wellington, and Nelson, who were singular for their penetration into the designs of others. It is essential to the lawyer in the examination of witnesses, and in feeling the pulse of the court or jury. Indeed, we feel convinced that the triumphs of the barrister who gains his reputation by jury causes, are to be attributed to a very great development of Secretiveness. We have verified the soundness of this principle by actual experiment. In those who are distinguished for exquisite tact in *drawing out* a witness, Secretiveness is always large. It is very necessary to the expert thief or pickpocket, producing both the faculty of concealment and the instinct of cunning. Of all the skulls of persons of this character, in the various phrenological collections, there is not one in which the organ is not considerable; and in Patch, who murdered his master, with so many circumstances of successful hypocrisy—in M. Gottfreide, who poisoned so many persons, and maintained at the same time so good a character—and, in general, in all poisoners and assassins, it is enormously large. No man can be a good police-magistrate, or Bow-street officer, who does not possess it almost in excess.

In authorship, a large endowment of this organ is indispensable. In the working up of descriptions, it enables a writer to detect and exhibit all the lurking phenomena necessary to complete the striking features of the subject. Not only to the dramatist, but to the sketcher of character, its action is so essential, that it may be said to be the principal source of his ability. Few men have made so many profound, original, and acute observations upon human character as Pope; and, accordingly, it is seen that he took so great delight in artifice, that it was said he could not take tea without a stratagem, and played the politician about cabbages and turnips. Addison and Cowper possessed equally great knowledge of character, combined with great piety; and such was their *mauvaise honte*, the joint effect of large Secretiveness and Veneration, that they were each presented with the same appointment, and had to give it up because it compelled them to appear as clerks to the House of Lords. In the skilful management of plots, for which Fielding is so particularly remarkable, this organ is the chief ingredient.

Mr. Combe conceives that Secretiveness makes the style of an author obscure, involved, and parenthetical, and attributes the clearness of Goldsmith's manner of

I do not like thee, Doctor Fell!
The reason why, I cannot tell;
But this I'm sure, I know full well
I do not like thee, Doctor Fell!

diction, to a want of this faculty; but we cannot see the force of this inference, either reasoning from facts, or *a priori*. No one will dispute the truth of the following passage of Shakspeare:—

“ This is some fellow,
Who, having been praised for bluntness, doth affect
A saucy roughness;
He cannot flatter, he?
An honest mind and plain, he must speak truth:
An they will take it, so; if not, he's plain.
These kind of knaves, I know, who in this plainness
Harbour more craft and more corrupter ends
Than twenty silly ducking observants
That stretch their duties nicely.”

If this organ be combined with large Combativeness, Firmness, and Self-Esteem, the style of an author, will, in fact, be remarkable for clearness, terseness, and abruptness. Swift, whose style is the clearest and least involved of that of any English writer, was principally remarkable for enormous Secretiveness; and Goldsmith could not have written the Good Natured Man, She Stoops to Conquer, and especially the Vicar of Wakefield, without a very large endowment of this organ. He certainly was not indifferently gifted with the power which led to the conception of intricate plots, and of the tricks and turnings of swindlers and impostors.*

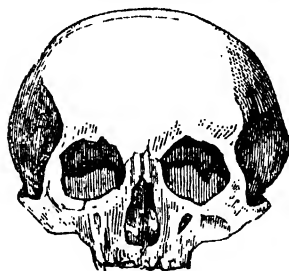
Secretiveness is a main element in the character of a sheepish, bashful fellow, or a “cuif” or “blate” person, as he is termed in Scotland. Along with considerable Amativeness and Love of Approbation, it also produces female modesty. Even when combined with Benevolence, the organ makes the contributions to charitable purposes anonymous. Blushing seems to be an intense desire for concealment of the feelings, and for avoiding prominence in society. To attract attention, is to have the eyes of all turned upon our looks, motions, sensations; and such attention produces a danger of discovery of the real thoughts of the individual. A person possessed of large Secretiveness, entertains, of course, upon such an occasion a dread of detection, and the exertion of suppressing his actual emotions, brings the blood into the face. Two patients who had been confined for many years in the Asylum at Marseilles, demanded their liberty, and were indeed to all appearance perfectly restored. Foderé, however, tried them on the subjects which had deranged them, and immediately their eyes sparkled, their muscles contracted, and an evident agitation took place, with a strong effort to preserve calmness. Here the naked function of the organ to conceal the outward expression of the feelings, was beautifully illustrated. Pinel, Marshall, Hunter, Andral, Beck, and other writers adduce numerous examples of this.

The involuntary action of the organ is well shown in the following passage of Jonathan Wild: “The two friends sat down to cards, a circumstance which I should not have mentioned, but for the sake of observing the prodigious force of habit; for though the Count knew if he won ever so much of Mr. Wild he should not receive a shilling, yet could he not refrain from packing the cards; nor could Wild keep his hands out of his friend's pockets, though he knew there was nothing in them.” Probably professors of slight-of-hand are led to their peculiar mode of exercising Constructiveness by large Secretiveness.

Among the lower animals this organ is very powerful. The dog hides everything, food, money, &c. So does the magpie and jackdaw. The cat cannot go across the street except by stealth, circuitously. She sits at a rat's hole, pretending to be profoundly asleep, while her downcast eye is only opened a mere hair's-breadth; and she sees the prey for which she has watched so long, coming to her claws, without moving a muscle or uttering the slightest sound.

* We may be excused for here—perhaps not very relevantly—adding our humble tribute of praise to the genius and character of Goldsmith, a man whom we venerate only on this side of idolatry. Mr. Prior has had the merit of giving to the world, in his life of this author, a portrait of the nearest practical resemblance to the Christian character which the annals of humanity can boast. How infinitely does “poor Goldy” rise in dignity and true greatness above Johnson, and all his venal crew! Little wonder, indeed, that a perfectly benevolent and just man should in such an age be called an “inspired idiot;” a name which the world will never cease to bestow upon all the sincere, and fearless, and humble followers of Jesus Christ.

In the diagram of a skull of a very dexterous thief, copied from a sketch of Vimont, here given, the organ is well defined, with large Destructiveness:—



SECTION VI.—*Organ VIII. Acquisitiveness.*

ABOVE, and somewhat forward of Secretiveness, is situated the organ of Acquisitiveness. Immediately below it is Alimentiveness; and it is behind the temples and the propensity of Constructiveness. When small, as in Eustache, whose profile is given in a subsequent part of this work, the side of the head at that place is flat, and often even sunken. When large, as in the skull represented in the last section, the head swells out laterally to a considerable extent.

Dr. Gall termed this organ that of Theft; and Spurzheim, upon the suggestion of Sir George Mackenzie, altered the definition of its function to that of Acquisitiveness. Vimont protests against this description of the elementary principle of the desire, and styles it, for various reasons which he assigns, the desire of possessing, or the love of what may be called proprietorship. The metaphysicians observed the existence of avarice, and pronounced it to be a peculiar modification of the love of power. Now, it cannot be too often repeated, that none of those necessities which an animal requires, are ever left to reason or the mere perception of utility. The substructure and basis of humanity is *animalism*. Man lives before he thinks; he eats before he reasons; he is social before he is civilised; loves even against reason; and becomes a Nimrod long before he is a Nestor. Had man not been an animal before he became rational, he would not have existed at all. Reason is evidently the last care of nature. She first secures existence, and then finds leisure to think. She begins by endowing man with the faculties necessary to enable him to provide for himself, before she ventures to animate him with the sentiments which dictate to him to look abroad for the help of others; and she bids him provide for others, before she allows to him that high advance in reason which gives him leisure to indulge in the more exercise of intellect. She has not formed him totally different from other animals, but rather added in his brain new organs. She has not, in his case, pulled down the fabric of sentient being, and reconstructed it upon a totally different plan. All that she has done, has been to add to the original edifice Corinthian capitals and Doric columns, bestowing reason, not to supersede, but to guide, direct, and perfect his animal nature. We may rest assured, therefore, that whatever principles in the shape of instinct are given to animals for their preservation and protection, are also instincts in man; and that what in them is a propensity or desire, is not in him anything else. We know that the bee, the beaver, the fox, the dog, many quadrupeds, and many birds, possess an instinct for storing and preserving. When we find that man hoards, collects, possesses, we are bound to conclude that he does so not by a habit, or as the deduction of reason, but by an antecedent instinct also. Were he never to husband until by experience he discovered that some seasons were barren and unproductive, he would only find out his error when starvation made the discovery come too late. He must possess a passion for storing, otherwise nature would sometimes be lavish in vain, and the provision whereby she made food capable of being preserved without spoiling or rotting, would be useless. To say that avarice is a modification of the love of power—possessions being regarded as a means to this end—is to contend that the miser reasons upon the subject of his

desire, a proposition opposed to the fact. The lower creation are misers, but it is absurd to suppose that they have a love of power. Why then infer the operation of another principle in the case of man? The ingenious speculation of Stewart and others, which suggests, that by the operation of the laws of association the means (wealth) are at last substituted for the end (power) in the regards of the individual, is easily exploded by a reference to fact. If it were true, misers would possess originally a great thirst for power; but unfortunately for these metaphysicians, this is not the case, for *ab ovo*, the avaricious are often meek, humble, obscure, unambitious. Indeed, in their thirst for possessing, they submit to the most degrading system of dependence; and, so far from being ambitious, they even become slaves and servants that they may gain something by their wages.

"If all animals," says Vimont, "were inclined to amass, the expression *desire to make provision* would be a very proper one. But there are many animals which have not this desire, and the definition is therefore bad. That of the love of theft is not better, for all animals and all men do not steal. Is the desire of acquiring, latterly adopted by Spurzheim, truly the character of the faculty? I do not think so; it appears to me no more than a form or degree of action of that faculty. Its principal feature consists, I think, in keeping, or regarding as our own property, the objects or things which are within our reach. The desire to possess, is no more, according to my view of the matter, than the first degree of the action of that faculty which I designate the love of property. That faculty, to be placed in a state of action, presumes the existence of external circumstances in harmony with the organization of the animal. The sparrows do not suffer other birds to usurp their nest. The fox, the goat, and many other animals, expel from the territory they occupy, creatures of their own species, which seek to divide their empire with them. The idea of possession, in this case, as in the instance of the human species, is that which appears to predominate. This proposition appears to me to be sanctioned by experience. I have known several individuals, distinguished for their love of acquiring, who have confessed to me, that in spite of a full assurance of the certainty of being the actual proprietors of objects, their minds were not at ease, nor were they satisfied, until they were actually reduced to their personal possession. The idea that the object was not their exclusive property, however absolutely they might have enjoyed all the benefit derived from the actual use of it, destroyed all the pleasure they felt in the possession of it. Avarice and theft, appear to me to be only the abuse of the sentiment of property." We are inclined to concur in these observations, although it is proper to observe, that they only state a little more clearly what Gall had long before declared, that the function of this organ was the love of property. But still, many difficulties surround the question of the analysis of this faculty. It is indeed true, that theft is neither more nor less than the instinct which desires to reduce to possession, overcoming the sense of the rights of others, combined, perhaps, with Secretiveness, to give a cunning, sly, deceptive character to the appropriation. And where the *cacoethes furandi* overcomes all countervailing elements, such as education, rank, the danger of punishment, and of the loss of character, of course it is to be inferred, that this love of possessing is so much the more intense. But it is not easy to see how this high and insane intensity of a passion for possession, can consist with the actual phenomena of the faculty. Thieves are in general so little incited to retain what they acquire, that they are proverbial for their prodigality. Many individuals in high life, who cannot resist the solicitations of itching fingers, restore with the most cordial and genuine cheerfulness what they have furtively appropriated; and we are perfectly aware, that many thousand persons who have no ambition whatever for personal possessions, are extremely frugal in the husbanding of public property, or the goods of their masters or employers—look upon retrenchment in the expenditure of the revenue with great pleasure, and feel a satisfaction in the great fortunes of other persons of the most disinterested description. In this last case, perhaps the principle of association may be successfully applied to the solution of the difficulty. The force of habit in personal frugality may give pleasure in the contemplation of general or abstract thrift, and the love of possessing being at last transferred to the object to be possessed, may produce in us a delight in the contemplation of wealth, even when it is not in our own exclusive custody. As for the prodigality of thieves, we are to bear in mind, that men are composed of many elements, and that where Conscientiousness is absent, the actions

of the individual are not those of the whole man, but only of the organ or faculty which may be most active at the time. Acquisitiveness being gratified with the theft of a gold watch, Amativeness or Alimentiveness or Benevolence, then calls aloud for gratification, and the mistress, or the palate, or the friend or the beggar, are indulged or relieved with the object of an organ whose activity is exhausted. We do not say that this reasoning is altogether satisfactory, but we at present do not detect in it any obvious fallacy. In the meantime, we shall proceed to point out the phenomena of the organ, about the operations of which there is less doubt, observing that they are all reconcileable with Gall and Vimont's definition, that it produces the love of possessing, or, perhaps, the sense of property, or desire of appropriation.

"Brutes," most justly observes Gall, "have none of those laws and social conventions from which property is said to result in man; yet property does exist with them, and they have a strong sense of it too." "A certain number of chamois will inhabit a certain mountain, upon which they will suffer no other whatever to come." "The same pairs of storks, swallows, nightingales, and redbreasts, return in the spring or in autumn, to the same country in which they had passed the season of the preceding year, and establish themselves. If another pair of birds attempt to seize the place already appropriated, war is immediately waged against them, and the intruders are forced to depart." "Cows returning from pasture, are observed, not only to enter their usual stable, but each one to take its own place, and suffer no other to occupy it. We see the same thing in respect to geese and pigs. Each one of the thousand bees that come home loaded with honey, enters its own hive, and woe to the pilfering bees that undertake to lay a foreign hive under contribution! With what courage do all animals defend their nest, and their females, and their young? What rash intrepidity will not the dog display in its master's house? Warmed by the sense of property, how boldly he defends his bone against a stronger dog than himself?" "The dog and cat in hiding food to be used when hunger returns; and the squirrel, hamster, and jackdaw, which collect provisions for the future, undoubtedly have the action of property in the stores they appropriate."

In man, the manifestation of this organ very early makes its appearance. The sentiment "It is mine," is one of the first that a child utters. He even reduces to possession the property of other persons, if it be for a moment put into his hands. Some keep everything they get, and share nothing; others divide it with all their companions; but, even in these latter, the principle of *meum et tuum* is so clearly apprehended, and distinctly felt, that if anything belonging to one is *taken* by another, temporarily used, or even touched, the proprietor immediately vindicates his own property. That is *my* doll, this is *my* jug, the other is *my* spoon, *my* plate, *my* chair, or stool, or cap; such is the universal language of children. If they have put labour on an object, the feeling is so much the stronger. *I put in that chair, or seat, is a sufficient answer to all efforts at illegal occupation.* Their books even, of which they are generally not very fond, are protected with jealous anxiety. Nay, so intense and instinctive is the passion, that should a child throw a toy away and despise it, and another, when it is totally abandoned, take it up, play with it, or attempt to use it, the original owner will immediately vindicate the possession, and although he will not take any benefit from it himself, will take care that nobody else shall, without, at all events, distinctly acknowledging his undoubted proprietorship.*

Metaphysicians, with the exception of Lord Kaimes, have supposed that reflection,

* We do not introduce into the text, because we are not fully satisfied of the correctness of the conjecture which this phenomenon of the infant character has suggested to us. But it cannot fail to be observed how largely the spirit of jealousy is indicated in this description, and that the sense of property may be as intense in connection with Amativeness, Self-Esteem, or Love of Approbation, as in its own individual exercise. A wife may contemplate a husband just as a child may regard a dog or a doll, and look upon the appropriation of every look, word, passion, or affection to herself, as her real and absolute property. So may a beauty on the admiration of the world, or a statesman on undivided power. It may require *Acquisitiveness* to desire the entire *monopoly* of love, admiration, or power to itself, and to "bear no rival near the throne." Without this faculty, these other passions and affections, while they may desire influence, praise, or love, may not be at all averse to share them with others. This question might easily be determined, by observing whether Acquisitiveness be small in persons who are destitute of envy or jealousy. Covetousness, which is only the envy or jealousy of property, is a name convertible with Acquisitiveness. An American Phrenological writer, Mrs. L. Miles of Philadelphia, has the merit (if it be one) of originating, in so far as we know, this theory.

reason, and the wants of society, alone have produced the sense and the right of property. But no proposition is more self-evident, than that mere reason, or external necessity, can stimulate man to do almost nothing. These persons might just as well contend, that a perception of the necessity of peopling the earth produced love, or that the fitness of charity was the cause of benevolence. Nature was too wise to trust to the theories of Bentham. She has made exertion for man's preservation and ordinary duties, not merely a necessary, but a pleasure of his life—knowing full well, that by nothing but an innate passion could she induce him to do what was necessary for carrying on the machinery of human and social existence. Eating has been made a pleasure, love a pleasure, and property a pleasure. If we would have any object well used, or any subject properly constructed, we must make it the exclusive possession of one. No animal, no house, no picture, must be owned in common, but one by A, another by B, and the third by C,—*all to himself*. Who troubles himself about that which is not his, or which is indifferently the property of all? Everything increases in estimation just as it is more likely to be related or to belong to us. And thus, everything, by being individually appropriated, is improved, tended, cherished; while it would otherwise be neglected or despised. How few men will labour to increase the wealth of the community, over which they have a mere fractional control, and in which they have a mere infinitesimal interest! Tell them that the field to be tilled will yield grain which is exclusively to fill their own barns, and they will immediately feel a real pleasure and satisfaction in the most arduous toil. Perhaps this argument is fatal to the theory of Owen. In his parallelogram, there is no provision for gratifying the passion of Acquisitiveness. The sense of property obliterated or discouraged, where is the happiness of toil, or the cheerfulness of individual exertion? He has begun to attempt a physical and political change, before producing that vast moral and intellectual revolution which can alone render the former practicable. He must make man essentially Christian in spirit and in heart, before he can ever expect that the social condition can prevail, which it is the great end of Christianity to produce. As the Creator has not merely rendered food necessary to us, but has made eating a pleasure—as he has made children not burdens, but objects of love, so has he made industry a great source of delight, by the fruits which it uniformly produces, and drawn us on to exertion by the hope of its rewards. But the only legitimate function of this faculty is to enable man to procure leisure for intellectual and moral pursuits—to prompt him to provide against future exigencies—to assist misfortune, and cherish his own household. It thus produces, when properly regulated, prudence, frugality, and economy. But it is the tendency of all the passions to substitute the means for the end, to forget the ultimate object to be obtained by their indulgence, and to rest in their exclusive gratification. Whenever Acquisitiveness is cultivated merely for its own sake, and without any other end than its own gratification, it is in a state of misapplication. We have shown that every time an organ is gratified, its solicitations become greater, and the difficulty of suppressing its cries is increased. It has also been found, that the seldomer it is indulged the more feeble it becomes, until its influence may ultimately be said to be almost extinguished. From this cause it is, that if a man have gained ten pounds, he solicits twenty—if a thousand, he wishes a plum—if a plum, he pants for a million. And hence avarice is to be found mostly among the rich, and is the monster that makes the meat it feeds on. It is thus also that the poor despise riches, are far more liberal for their means than the wealthy, and that their distinguishing vice is improvidence and prodigality. In them, Acquisitiveness has never been gratified, and is therefore never stimulated. It dries up for want of nourishment, and never rises to even ordinary foresight or frugality.

Like all desires or propensities, this organ is blind, and therefore does not of itself select its objects. These are determined by the intellect and other faculties. It is the moving cause to the formation of all collections and museums. When combined with Concentrativeness, it prompts to the collection of antiques, and coins, and rare books, or ancient apparel; when with Veneration, it gathers autographs, and other personal attributes of great or good men, and so forth. And here it is necessary to guard against an error which superficial consideration is very apt to superinduce. Persons possessing large Acquisitiveness often tell the Phrenologist that they have no love of money, but, on the contrary, have often to reproach themselves with extravagance in spending large sums in purchases. The answer is easy.—Money

is a mere representative of other commodities. If the other organs be small, and Acquisitiveness large, then in civilised life money will be the sole object of attraction. But the desire of this organ is merely to *have*, and if others are also large, such as the perceptive faculties, Constructiveness, and Imitation, money will be converted into books, pictures, statues, scientific apparatus, &c. These will be hoarded, nay, often even stolen, for *virtuosi* are notorious thieves. They will never be lent or given away. They may be resold to purchase some other object or possession, but not a single article will be wasted or gifted.

We have said that this organ gives the propensity to acquire, but it is an ulterior question, how it acts in giving the power to keep. Where two or three organs exist which all equally demand gratification, they will each solicit to have their turn. Acquisitiveness will produce the love of wealth; it will cheapen, retrench, reduce, make hard bargains, be on the alert for the market, prevent waste, and keep expenditure within income. But if Love of Approbation and Adhesiveness be large, hard earned money will be spent on fine houses, furniture, clothes, equipage, unbounded hospitality. If Benevolence demand supplies, the gains of the hardest bargain will be given to the poor, or to those who want assistance; and it is no uncommon circumstance, to see a person who saved every shilling he could, who practised the most rigid economy, who denied himself and his family every luxury—lavishing large sums upon others, becoming security for any friend, running many risks, and sustaining much loss by a too kindly nature. We know of a couple who enjoy an income of £7,000 a-year, with large Acquisitiveness and Philoprogenitiveness. They live through the week upon liver and lights, rejoicing that the Sabbath excuses them from the consumption of butcher-meat, by the sin which cooking brings with it, so that they can put off themselves and their servants with bread and cheese. Yet they give enormous sums to their son, who disposes of it in the grossest extravagance, and take the utmost pleasure in lavishing all they can upon him. Sir Giles Overreach declared that he took more pleasure in amassing money, than his daughter, on whom he heaped his ill-gotten thrift, could possibly take in spending it. Scott, with his usual profundity, has detected this feature of human character. The Laird of Milnwood left a large estate to his housekeeper, an inveterate miser. Whenever Morton returned, however, she joyfully bestowed it upon him, entering at the same time into the long detail of a scheme of rigid parsimony, which she proposed he should follow. "We will talk of that another time," said Morton, "surprised at the generosity upon a large scale, which mingled in Ailie's thoughts and actions with habitual and sordid parsimony, and at the odd contrast between *her love of saving and indifference to self-acquisition*."

Where this organ is very large, it operates with the same tremendous and irresistible force which we find to exist in the action of Alimentiveness. It is totally beyond the control of the will, and, as in the example of the unhappy drunkard, it overcomes and prostrates every opposing influence. In all such cases, we should contemplate the object with pity, not anger. The offence should be uniformly treated, not as a crime, but as a mania, as certain, as incurable, and as little the subject of punishment as the action of a raving lunatic. Mr. Simpson has given a most interesting narrative of a young gentleman, who, excellent, virtuous, pious, and amiable in every respect, could not, although wallowing in wealth, abstain from seizing every object he saw; and the following cases illustrate this proposition still more distinctly. They are extracted from the Examiner newspaper. "Henry Smith, a smart lad, aged thirteen, was convicted of stealing a diamond, the property of his father. The boy has been twice convicted, and kept solitary, and whipped, but on his liberation he returned to his old habit of pilfering. *The little fellow, with tears, prayed the Court to send him to the convict-ship, in order to break him of thieving.* Court: Why do you thieve? Prisoner: *I cannot help it, I must do it.* The Schoolmaster of Newgate was consulted as to the boy's intellect; and he was reported to be shrewd, of sound intellect, but so addicted to theft, that only last night he robbed a fellow-prisoner of a shilling. The Court complied with the prisoner's request." "LADY THIEF.—On Saturday last, a female, moving in the *upper circles* of society, in Ramsgate, and possessed of *considerable wealth*, was detected in the market of that town *pilfering turnips* from a poor woman's stall; and, having been long suspected of similar disgraceful acts, an immediate hue and cry arose among the market-people, which had well nigh brought summary vengeance on the head of the offender. As it was, she had some

difficulty in reaching her domicile in safety, although protected by the police. The sum of 40s. has been paid to prevent prosecution." We are aware of cases of judges stealing spoons, books, &c. and of clergymen, high in reputation, pilfering from shops. It is notorious, that silk mercers, haberdashers, and jewellers, are so unmercifully robbed of lace, trinkets, and so forth, by their highest, richest, and most noble customers, that they have been compelled to place mirrors all round their shops, and to employ shopmen to do nothing else than watch the fine ladies that drive up to the door in their own carriage. Many of them are so well known, that they are just allowed to steal what they like; it is put down to their account, charged, and most regularly and cheerfully paid. All this is exactly as we should have anticipated. Wealth stimulates the love of wealth, and Acquisitiveness is thus encouraged. Most of these high, rich, and titled dames, are rickety, or at least of a nervous, susceptible *high pressure* temperament, with brains, in short, bordering on disease. Many of them are scrofulous, and, therefore, although not apparently, yet actually unhealthy in their cerebral system. When an organ, then, solicits gratification, it is so extremely powerful, that its action becomes irresistible, and hence, turnips, a commodity of no value, are actually appropriated by a Countess. All this should be looked upon as a disease which cannot be cured, which is to be lamented, but never blamed. The unhappy individual should still be loved and esteemed for his or her many other admirable and noble qualities, and no more hated or despised for this calamity, than he would, or ought to be, for a club-foot or a hare-lip. If the world must condemn, let them rather visit their reproaches upon the vicious and cruel parents, who dared to encounter the responsibility of becoming fathers and mothers, before they had divorced themselves from gluttony, or epicurism, or drunkenness, or riotous luxury, or lechery, whereby they brought into existence children with vitiated brains, who afterwards disgraced them. Would to God, that the unthinking, unfeeling, uncharitable world would contemplate the actions of men in the mild light of calm philosophy! Then, instead of insulting, and scorning, and degrading the poor unhappy wretch, who, mad upon the subject of Acquisitiveness, was sane, sound, noble, and virtuous in every other respect, and driving a good and great heart to despair; they would sympathise with the malady, as if it were a fractured limb or a consumption, and treat it as they would any other distemper. Should these remarks meet the eye of any one afflicted with this malady of the brain, we would bid them not despair, or hate themselves, or feel degraded, but while they will use all physical means to create a cure, let them but think that they are patients, not criminals. We were lately asked to examine the heads of a number of pupils who boarded with an excellent and intelligent friend, and found in one, that this organ stood out like a hen's egg from the head, in such deformity, that we inquired whether the boy had not received a blow, and were answered in the negative. We then expressed to the gentleman our deep regret that so fine a boy was afflicted with the *disease of theft*, which we saw must have been the result. He informed us that the poor little fellow had from infancy been an inveterate thief. We pointed out the evidence that he had been rickety, scrofulous, and precocious, and was, therefore, in so far as regarded this organ, not of sound mind. We earnestly condemned, as we now do, the practice of sending such children to school, or of subjecting them to any mental labour, as directly calculated farther to stimulate the brain and make the child worse. We beg parents to send all such to the country, to keep them mentally idle, and corporally active; subjecting them to privations of comfort and of food, so as to make the body hardy. The brain will thus get time to recover its tone, and when the quickness and precocity wear off, they may be assured that sound reason is returning. The little urchin, who, born in the lower ranks of life, commences the exercise of this instinct at seven or eight years of age, is sent to Bridewell about a dozen times without any change in his conduct, is banished, returns and begins again. He tells the jailor, that he can no more help stealing than he can help eating; being angry, or falling in love. But society will not take the trouble to think on the subject. It finds it easier to punish than correct, and continues to perpetrate the grossest injustice, as well as greatest absurdity, rather than occupy itself with the care of devising a proper remedy. That the excuse of ignorance might not be pleaded, we represented these facts to the Government of the country, and offered, as a test of our views, to point out to the proper authorities, the most incorrigible thieves in the hulks, solely by their developement of Acquisitiveness. But all our remonstrances

were disregarded, and we were politely, but distinctly told, that our experiment could not be attended to. We trust, however, that the country will take the question out of the hands of their rulers, and no longer permit the perpetration of the wholesale cruelty and injustice, which has so long disgraced the annals of our criminal jurisprudence.

The Carib skull exhibits a very moderate developement of this organ, and it is certain that that tribe never steal. The Spaniards and Savoyards are equally honest, and equally poorly endowed with this organ. The Kalmucks, on the contrary, possess it very large, and steal everything, restoring the articles however, it is said, with great pleasure. An immense number of cases of theft are recorded by Gall, from which, we have only room for a small selection:—Amadeus I. was an inveterate thief. A physician stole every time he visited his patients, but always returned the articles. A thief, just before being hanged, stole the watch of his confessor, at the very foot of the gallows. An ex-commissary of police, being convicted of stealing silver-plate, pleaded that the crime arose from a wound on the side of the head. Acrel saw a patient, who, after a blow on the temple, stole instinctively. Esquirol mentions a knight of Malta, brought to his asylum, who stole the spoons, covers, forks, &c. at all the inns on the road, and pocketed the cups and saucers at the coffee-houses. Two citizens of Vienna, living in the same room in bedlam, stole rags, straw, clothes, wood, and all sorts of trash, pilfering even from one another.

In all cases of theft, we are not to expect a large endowment of Acquisitiveness. Persons whose Conscientiousness, Self-Esteem, and Cautiousness are small, will steal when impelled by circumstances, if they possess large Secretiveness. The organ is established by ample evidence.*

SECTION VII.—Organ IX. Constructiveness.

THERE is no subject which presents to the Phrenologist greater difficulty, or which has been the cause of greater contrariety of opinion, than the organ of Constructiveness, both as regards its function and situation. Gall designated it the organ of Mechanical Talent, Spurzheim the instinct of Construction, and Vimont divides the organ into two, the former or upper of which, he calls the "Sense of the Beautiful in the Arts," and the latter or lower, the Sense of Construction. While the first Phrenologists have placed the convolution and its functions among the propensities, Vimont inclines to make it a sort of *attaché* of the Intellectual Faculties.

* The case narrated by Mr. Simpson in the Phrenological Journal (Vol. ix. No. 45, p. 459), to which we have more than once alluded, is so extremely valuable and instructive, both as an evidence of the truth and utility of the science, and as a lesson to the moral teacher and lawgiver, that, although somewhat long, we think it well worthy of a place here in an abridged form.

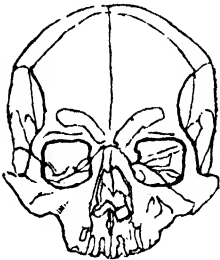
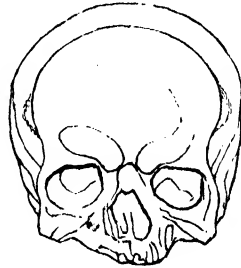
An English gentleman, aged nineteen, and his tutor, a clergyman, requested that the developement of the former should be taken, which was done, under the superintendence of five Phrenologists.

DEVELOPEMENT:—General size of head considerable; anterior lobe large; temperament, two parts sanguine, two nervous, and one lymphatic. Developement irregular and unusual.

1. Amativeness,17	13. Benevolence,.....20	25. Weight,.....18
2. Philoprogenitiveness, 18	14. Veneration,.....20	26. Colour,.....14
3. Concentrativeness,....14	15. Firmness,.....13	27. Locality,.....18
4. Adhesiveness,.....16	16. Conscientiousness,....14	28. Number,.....15
5. Combaticiveness,.....12	17. Hope,.....20	29. Order,.....13
6. Destructiveness,.....15	18. Wonder,.....17	30. Eventuality,.....18
7. Secretiveness,.....17	19. Ideality,.....14	31. Time,.....17
8. Acquisitiveness,.....18	20. Wit,.....15	32. Tune,.....13
9. Constructiveness,.....13	21. Imitation,.....18	33. Language,.....16
10. Self-Esteem,.....19	22. Individuality,.....17	34. Comparison,.....16
11. Love of Approbation, 12	23. Form,.....18	35. Causality,.....17
12. Cautiousness,.....13	24. Size,.....17	— Alimentiveness,.....17

He had been ricketty, scrofulous, and unable to walk alone until six. He was always at "high pressure." Knowing that the impulses were thus strong, the Phrenologist treated the case as one of a certain degree of derangement. He inferred that all these classes of faculties

The locality of this organ has been most erroneously indicated in *all the model busts*. It is placed far too low, and the reason of the error we take to be this:—Its position, as is the case of all the organs, is not positive, but relative, differing with the forms of different heads. In all persons of adult age, there will be found a sharp and angular projection of bone, commencing at the external angle of the eyebrow, where the organ of Order is situated, and running up the outer and lateral verge of the forehead, to the base of the organs of the Moral Sentiments, continuing the ridge back to the termination of the organ of Cautiousness. Upon this ridge, is situated the organ of Tune, immediately next to that of Wit. At the top of the temples, at the front part of the side of the head, and adjoining the organ of Tune, just below the point at which the angular projection, below the base of the coronal surface, joins the ridge which we have already described as running up each side of the outer angle of the forehead, is situated a round projection, which indicates the organ of Constructiveness. In order that the reader may comprehend its locality more distinctly, we have here given on the one hand, a diagram of the New Holland skull, in which the organ is very small, and the head flat, at the front part of the side of the head; and on the other, a sketch of the cranium of Adjutorio, an eminent patron of the arts, in which the development is large.

New Hollander.*Adjutorio.*

would act with a force beyond the control of the individual. The tutor was much struck with the question, "Does your pupil ever appropriate articles that do not belong to him?" and the answer was given, that he had been forced to quit a great educational institution for detected *theft*, both in shops and houses. It was then asked, If he was a slave to the solitary abuse of *Amativeness*? *Answer*: The vice showed itself by natural impulse, so early as at six years old. A question was put, Whether fits of unaccountable voracity sometimes showed themselves? *Answer*: The three vices acted simultaneously, so that the stealing propensity had to be watched, whenever the voracity showed itself. The solitary propensity had injured the whole brain, and incipient paralysis, its usual consequence, was observed from other symptoms. The Phrenologist told the tutor that his pupil was a *PATIENT*, not a *CRIMINAL*. He was of a family of fortune, wanted for nothing, and had no temptation to theft; yet, nevertheless, the propensity was beyond his control. Wherever he had turned, he had seen hostile society, and even legal vengeance; the walls of the late place of his studies chalked with his disgrace, and prosecution threatened by tradesmen. The present was the first time that his guardian had heard him humanely sheltered as an irresponsible being, visited with *disease* by his Maker's hand. The organization of the young man indicated great kindness of heart, which his tutor said was manifested at any expense of personal labour; great tenderness to children; and, what was most to his tutor's content, ardent devotional sentiments, and active religious habits. These last, he said, extended not only to much prayer and contrite confession of his besetting sins, but to visiting and praying with the sick, reading with the poor, and zealous teaching a Sunday-school. Of course, all who knew the fatal propensity to which the young man was subject, set all his religion down to gross and disgusting hypocrisy. Not so the Phrenologist, who knows that such feelings are quite as much impulses as the acquisitive propensity itself. Flying from prosecution and persecution, without one friendly hand held out to him, save that of his kind-hearted tutor, and a few pious persons who prayed over him in vain, the outcast comes at last, at the distance of hundreds of miles from his forbidden home, into contact with the disciples of a new and ignorantly despised philosophy of man, by whom his case is at once understood and explained, a friendly shelter thrown over his disease, and an appeal made in his behalf, to all who had unknowingly treated him with injustice, to remove the brand of crime which they had contributed to stamp upon his brow, and to judge him as we humbly trust his Maker will, who has visited him with disease, and in so far released him from responsibility.

That we do not stand alone in our opinion that this is the locality of the organ, we were happy to find, on inspecting a skull in the museum of Mr. Bally of Manchester, which, marked by Dr. Gall himself, indicated this as its exact position. We pray the reader then to remember, that it is situated immediately on the outside of the organ of Tune, at that place exactly above which the ridge of the coronal surface joins the outer angle of the forehead. On consulting Vimont's Atlas (plate 108, figure 2), it will be found very accurately indicated in the skull which was supposed to be Raphael's, in the convolution which he supposes to be that of the "Sense of the Beautiful in the Arts." If the Phrenological student will carefully compare a number of skulls with each other, he will find that they vary very materially in the height to which this outer angle of the forehead is carried. In some, as in that of Adjutorio, this osseous ridge runs up perpendicularly on each side for three or four inches, before it joins the ridge running backward along the base of the coronal surface; and, consequently, the organs of Tune and of Constructiveness, the former at the top of the outer edge of the forehead, and the latter immediately at the outer side of Tune, above the temples, are comparatively high up. In others, as in the Carib, in most savage, and in all inferior heads, this ridge, instead of rising perpendicularly from the outer angle of the eyebrow, begins to slope backwards, almost from the point where it commences; and these organs (Tune and Constructiveness), although relatively in the same cranial position, are absolutely much farther down than in the former class of heads, and are situated nearly in the position indicated in the busts. Still, as in these model heads this ridge is high, the situation of the organs is very incorrectly indicated.

There are some physical particulars, which will assist us in the investigation of the function of this organ. In the first place, we do not agree with M. Vimont in his position, that there are two organs at this region. And even although there were, we could by no means concur in his definition of their function. It is plain that each man possesses all the organs which can be found in any individual of the species, and that, therefore, if there existed two organs at this region, they should be found in all heads. But M. Vimont will search in vain for his two organs in the New Holland or Carib skull, although he may find the one organ enlarged to the apparent size of two, in the European head. Secondly; we have found frequently a complete hollow at that part of the cranium where he supposes the organ of Constructiveness to be, in very superior mechanicians, but have always found the upper part of the head, where he supposes the Sense of the Beautiful to be, largely developed in all such; many of whom, at the same time, had no taste for the beautiful, and no love of the fine arts. In persons of a poor appetite, the region where Vimont's locality of Constructiveness is supposed to be, will be found much depressed; as the appetite increases, it will be found to enlarge, and is always very greatly developed in epicures and gluttons. Thirdly; the organ is manifestly placed without the region of the intellect, and within that of the propensities. We may, and must therefore rest assured, that, whatever be its function, it is a propensity or desire, not a perception.

Vimont has most wisely remarked, that wherever an organ exists of a faculty common to man with the lower animals, we shall most accurately ascertain its proper function, by watching its mental manifestation in the brutes. It has also to be observed, and this holds true of all the faculties, that whatever we desire or love, we most constantly pursue and practise; and, that in whatever we are careful to cultivate our talents, we are sure to attain expertness and dexterity. Thus, no man who possesses large Amativeness, is deficient in a talent for intrigue; none that love children, are unskilful in pleasing them; and he who is fondest of money, generally falls upon the way of amassing it. With these two principles in view, we proceed to observe, that the term Constructiveness is an absurd one. It means to strew, or put, or arrange together, while the very Phrenologist who first gave it the name, stated that it was greatly developed and powerfully manifested in animals which never perform such an operation. The rabbit does not build, it only hollows out. The fox, and many other animals, are in the same predicament. Therefore, the organ in them, is not the love of building or constructing. Many birds that have nests, take no trouble in shaping them; some bees hollow out cells in the ground, others place their hive on the surface, protecting the wax merely with moss, and many hang an oblong globe on the branch of a tree, covering all with a waxen film. But

the most puzzling part of the matter, which, so far from being explained, has not even been noticed by Phrenologists, is this. All desires are blind, and are of course mere passions or instincts. Dr. Spurzheim's nostrum for the solution of all his difficulties, that in each animal there is a peculiar *modification* of the organs, producing different results, has by him been applied to this; and he has called the desire to burrow, or to scoop, a modification of the love of building or putting together. But we cannot too often repeat, that desires are blind and instinctive, and cannot determine the form of their own gratification. That must depend on the habits of animals, their peculiar combinations of instincts, their corporeal constitution, and the nature and extent of their intellectual faculties. If Constructiveness, as is on all hands admitted, be a propensity, it must incessantly crave for action, and must at very short intervals manifest its tendency. But the confounding phenomenon of its action is this, that when a bird has built its nest, it *ceases altogether to build any more*, or to exercise its constructive instinct in any shape whatever. A swallow comes to Scotland in summer; it builds, with great care, precision, and neatness, a comfortable nest; and having done so, it builds no more. Year after year, it comes to the same domicile, and so long as it lives, it never erects another. That it does not lose the capacity, may be soon proved by breaking down its nest, when straightway it will form another. Now, were the faculty which enabled or prompted it to build or construct, a desire or passion, it would never cease doing so by any mere force of external circumstances. It would, at the least, have periodical paroxysms returning, like the love of sex, or of young, with every revolving spring. Another circumstance is also notable. The edifice or hole, is always adapted to the wants of the animal, and to the nature of the region it inhabits, often varied in its structure in the same species, with a change of physical circumstances, the constructive skill never being exerted beyond the necessities of the case. No bird or beast ever takes the trouble of constructing a den, or hole, or nest, of a more complicated description than is demanded by its Secretiveness or Cautiousness, or power of flight, or defence, or watchfulness. Often it is contented with the fissure of a rock, or a few dried leaves, or some bits of straw and stick, huddled together in the mere form of a nest. Sometimes, as in the case of a hare, it is contented with a hollow form on the earth, made by the mere act of recumbency of the animal. The dog, the lion, the elephant, and many other animals which neither build nor burrow, scrape in the earth, and choose dens, or comfortable and warm places presented by nature, to cherish themselves and young, and often show much dexterity in the use of their paws, and the ingenuity of their contrivances; and many birds, such as the cuckoo or the hen, select the nests of other birds, or find out a natural one, which they use and enjoy as much as those which build. It is said, that in localities where there is no winter, the bees have no hive, and make no honey. All these considerations incline us to believe, either that the function of Constructiveness has been misapprehended, or that it does not exist in those animals in which its development has been said to be remarkable. We are inclined, by reasons equally cogent, to dissent from the views of its function taken Mr. Richard Edmondson and others, who suggest that it produces the talent of manipulation, or the power of modifying and commanding muscular force. It has been forgotten that this organ is indifferently, and even very poorly developed in animals, such as the lion, tiger, horse, goat, chamois, monkey, whose manual and muscular dexterity, and power of modifying and regulating all their movements, is very great; while, in the building birds, there is to be found, *at least*, no greater faculty of this kind than in those which do not. It has also not been kept in view, that the organ is in the region of the propensities, and is therefore not a power, but a desire, not a faculty, but an appetite; the capacity having no more relation to the inclination, than the muscular strength of a boxer to the size of his organ of Combaticiveness. Its function is, therefore, in our opinion, involved in the utmost obscurity.

In birds, it is found that until they pair they do not build. Indeed, until they are about to deposit eggs, we find that they are not moved to adopt any measures for the construction of a nest. We have, for some time, watched a tame domesticated female canary. It has very frequently laid eggs, and even did so on the 15th of January. Some days before it lays, it always begins to pick up bits of thread, worsted, and cotton, being also very careful in collecting its own stray feathers. From want of a mate and of example, we presume, it is very evident that it does not know what to do with the materials, for, after picking them up, it just puts them

anywhere, and lays its egg in its cage. Still, there seems to be here some sense of foresight, or an inclination to provide beforehand for the future. All birds, we are aware, build before laying; and all other animals which make houses, store and hoard for the winter, some having a regular larder for provision. The constructing birds which do not collect provisions, emigrate the moment food threatens to be scarce, and fly to a country where they can procure it in abundance; in this, as well as in feeding, the brooding female, and afterwards the young, perhaps also manifesting the desire of foreseeing, providing for the future, anticipating difficulties, and adopting beforehand the means of obviating obstructions.

We have already remarked, that a desire, by continually stimulating the perceptive and reflective faculties to observe and consider the objects by which its gratification is procured, gives the mind the peculiar cast of thinking, which is best calculated to subserve the purposes of the propensity; as Acquisitiveness makes the intellect expert in the amassing of property, or Combativeness and Destructiveness stimulate the mental powers to frame the most triumphant victory, if they be at all adequate to master the principles of war. It may also train the whole system, from the earliest infancy, to that muscular command and manual dexterity, which are absolutely necessary to the slightest success in any endeavours to gratify the desire. The power of resolution and inclination to realise the wishes, expectations, and designs which they form, is indeed proverbial. Even although the organ now under consideration, therefore, be a mere propensity, we need not be surprised if there should be a concomitance betwixt its development and mechanical aptitude, because, by perpetually stimulating the perceptive and reflective faculties to select and combine the objects of its gratification, it may always be found conjoined with the capacity for realising its own desires.

Perhaps the love of planning, designing, scheming, manœuvring, anticipating, meeting evils with their remedies, may come nearer the function of the organ, than any principle which can be suggested. The Constructiveness of Napoleon was very large, and he seems to have been chiefly remarkable for an astonishing power of providing beforehand for every contingency, and guarding each vicissitude with a remedy carefully preconceived, so that everything should occur exactly as it had been planned. It has been observed by Mr. Combe, that an eminent lawyer, in the midst of the most abstruse legal speculations, was often seized with vivid conceptions of mechanical inventions; and he likewise notices the fact, that President Blair possessed a large development of this organ, and had a private workshop, in which he spent much of his time constructing machinery. The principal feature in the intellect of this great lawyer, was known to be a proneness to theorise, and an amazing ingenuity of intellect, whereby he managed to reconcile all phenomena with a particular principle, and to place every argument in a new, original, and although sometimes fanciful, yet always in a feasible and consistent light. John Clerk (Lord Eldin), whose Constructiveness was equally large, was singular for his amazing ingenuity of argument and fertility of resource, whereby he often made the parts of a bad cause hang so well together, as to redeem it when it appeared hopeless, changed the whole ground and position of the action, and descended on his unprepared adversary like a thunderbolt. Many lawyers deficient in sagacity and profundity, have, at the same time, a fertile felicity of expedient and tact of management, which obtain for them great eminence. Their pleading may be a mere cobweb, which a strong mind sweeps away at once, but still it is in itself consistent, tenacious, and complete. Other persons, of the strongest intellect and the clearest head, can see none but the most obvious views. They may be direct, logical, profound, and sagacious, but are, at the same time, neither subtle nor ingenious. A very eminent Scotch lawyer, lately deceased, had a large development of Language, and enormous Constructiveness, with reflecting faculties of a very humble order; and it was the remark of an able judge, that he owed his eminence altogether to the prodigious skill with which *he blocked out the statuary of his cases*, as he termed it, or managed them in such a way as to render every part of them consistent and complete. We have very frequently seen the notes of very great lawyers, on cases which they were to plead, and they were drawn up in a regular plan of attack and defence, as complete as the scheme of a pitched battle or campaign, in which it was wonderful to observe, that beforehand every weak point was anticipated, fenced, and guarded, and often strong features of the action entirely concealed, because they did not harmonise and consist

with each other, or with the only theory by which the cause could be gained or saved. We shall see that the knowing faculties perceive the nature of external objects, remember their phenomena, and notice their qualities. Constructiveness, therefore, cannot be the organ which obtains a knowledge of these properties. But these organs neither perceive relations, nor possess any sense of mutual adaptation. May not Constructiveness be that organ whereby we possess a love of assimilation, of individualising, of fashioning, or collecting into a specific form or given entity, what is heterogeneous,—manifested in the lower animals, probably, in the shape of amassing winter stores, or of selecting sticks and straws, often without further effort than mere collecting, as the materials of a nest; and in man, by a sense of fitness, the harmony of connected objects, the bearing and dependence of detached circumstances, thoughts, facts, events, or material existences? The Germans and French, who erect any and every thing into a science, and are distinguished for their love of congruities and systems, are eminent for the developement of Constructiveness, as were the Athenians, who had as many systems of mental, and moral, and physical philosophy, as there were students in their city. Indeed, what was sophistry but the art of constructing a consistent and plausible theory for any proposition which it was necessary for the time to entertain? May it not be, then, that this organ produces the sense of adaptation—of consistency—of relation betwixt parts to produce a whole, to put together for a common purpose, to place in juxtaposition for a combined effect? When Wonder is in a diseased state, how singular is it to find the lunatic converting every circumstance to the aliment of his particular theory or hallucination, and, by some strange necromancy, turning all he touches into nutriment for the system which he has preconceived, and reconciling the most contradictory elements. It occurred to us, as we wrote these observations, that Emmanuel Swedenborg was particularly distinguished by his singular powers of adaptation of all particulars to the general theories he propounded, and by the felicity with which he constructed three different systems of Biblical interpretation, each consistent in itself, and all harmonising in an apparently well-fitted combination. We turned immediately to his biography, and were much struck, as well as gratified, to find that this man was no less eminent for his *mechanical inventions* and *constructive powers*, than singular for his theological views. Some men, in composing, make every point bear upon the last, by the most ingenious but irresistible connection; while another produces paragraph after paragraph, containing the most profound, conclusive, and able logic, and in which the result is a number of shrewd and sagacious propositions, but no single one bearing upon the rest. Some persons compose fragments by the hundred, or songs by the thousand, but no continuous poem; others write detached essays, but no book—an anecdote or incident, but no three-volume romance—a narrative, but no history—a madrigal, but no overture; they frame the single figure, but not the group—the parts separately, but not the whole. Causality may perceive the relation betwixt a cause and its effect, and Comparison detect the analogies of sequences, but neither may prompt the mind to construct a system of logic or a complete body of moral science. There seems nothing in these organs which should lead to anything more than a collection of syllogistic or inductive propositions, each accurately deduced or clearly reasoned, but at the same time woven into no common subject, nor combined in any elementary digest. There appears still wanting the weaver, to put the warp upon the loom and unite the threads into a connected web. May not the want of this desire, by neglecting to instruct and incite the intellect, be the cause of a certain hard, dry abruptness of thought, which falls, as it were, still-born from the mind—cutting the speech up into chasms, over which no bridge is cast to lead the traveller from one table-land to another—a series of propositions which, like rods, are not related, although they touch one common base? We hazard these thoughts for farther investigation, and shall here close this very intricate subject.

SECTION VIII.—*Genus II. Sentiments.*

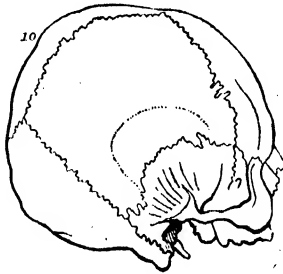
THE second Genus of Feelings, embraces what Dr. Spurzheim calls Sentiments, and which he describes as corresponding with the “Emotions” of the metaphysicians. It is not easy to define the peculiar nature of these under a general classification, from the very imperfect state of psychological analysis which still exists; nor have

we yet been enabled to see that the principles of distinction which have been made betwixt these and the propensities, have been justified upon the grounds hitherto maintained. Indeed, Mr. Robert Cox has established this very satisfactorily. Spurzheim was far too anxious to give Phrenology the mere surface and semblance of a system, by the erection of many artificial and fanciful distinctions, which possessed no real or substantial difference, and which have only had the effect of tempting the enemies of the science, so to confound the absurd and fanciful with the sober and the true, in his lucubrations, as to subject the science to unmerited, but often triumphant ridicule.

The subdivisions of this fanciful classification have not been conceived with greater precision. They are inaccurate in point of fact, and, indeed, are not warranted by Spurzheim's own analysis of the faculties. The first head of this division embraces all the Sentiments common to man with the lower animals. Of these, there are said to be only three, and from the list are obviously excluded many, such as Firmness, Wonder, Imitation, to which the brutes can prefer as clear a title as man himself. Upon this subject it is, however, useless here to enlarge, as we hope that there will be called together some convention of the states-general of the Phrenological kingdom, to settle this and many other subjects, upon which it is absolutely necessary that there should be concerted some general articles of universal agreement. On this account, we here forbear all attempts at any alteration of the current and recognised classification.*

SECTION IX.—*Organ X. Self-Esteem.*

THE organ of Self-Esteem is, according to Mr. Combe's description, "situated at the back part of the mesial region of the vertex, where the coronal surface begins to decline towards the occiput, and a little above the posterior or sagittal angle of the parietal bone. When it is large, the head rises far upward and backward from the ear, in the direction of it." Its locality will be better understood by the following outline, and by the diagram exhibited at the end of next section, where it is indicated



as No. 34; upon which latter we would observe, that although it correctly represents the form or shape of the organ as generally drawn and described, and although

* We think it has become essential to the future progress of Phrenology, with anything like the rapidity which it deserves, that some general measures should be agreed on, by a congress of the disciples of the science, whose proficiency and eminence might give weight to the laws they might think it right to issue for general adoption.

We think the erection of a college, for the purpose of granting Phrenological degrees, loudly called for. The science has been deeply injured by the want of some precise standard of the proficiency of the professors of the science, whereby the St. John Longs and Morisons of the system, who manipulate and predicate character with the most impudent assumption, while they possess neither the peculiar cerebral developement, nor the knowledge necessary to enable them to practise the science with the least chance of accuracy or success, may be at once detected, exposed, and exauctorated. A board of examiners would wonderfully diminish the quackery of many itinerating pretenders, who earn an idle livelihood by converting Phrenology into a most dishonest scheme of mere fortune-telling. A diploma would separate the ignorant from the intelligent, and free the system from many unjust aspersions. When it is publicly proclaimed that the science will not be accountable for the practices of any who are not regularly recognised by the great body of disciples as skilful professors, its friends

it sometimes takes the appearance there given, it is, in our experience, more frequently found to extend itself laterally and horizontally, rather than longitudinally and horizontally. In both cases, the projection is outward and backward. It must not be confounded, as it often is, with Concentrativeness. It is always farther up, and when large, its greatest projection is in the centre of the top edge of the crown of the head, immediately behind the organ of Firmness.

Dr. Gall found this organ, he says, large in all animals which loved the higher regions of the air, mountains, and other elevated situations, as the roebuck, the chamois, the wild goat, and certain species of eagles and falcons. He observes, also, that the greater the height at which the animal lived, the more was this organ developed. Dr. Spurzheim on this remarks, that Gall had confounded the organ of Concentrativeness (No. III.) with Self-Esteem (No. X.); but admits the fact, that all animals which attach themselves to physical heights, have the organ of Concentrativeness largely developed. We have already commented upon this subject, and we now state farther, that we have no confidence whatever in the accuracy of these observations. On the contrary, we believe them to be altogether false and fanciful. The wild duck *lives* in a swamp, below the level of the sea, and immersed in the waters of the valleys. Yet its habits of flight prompt it to ascend a greater distance into the air, than almost any bird in the catalogue of ornithology. The lark, that sings at the gate of heaven, and disappears in the sky, has his nest on the ground, in the hollow of a furrow. Whether, then, have these birds the taste for physical heights or physical chasms? If Gall be right, we should, unquestionably, very much wonder that Holland should ever have maintained a republican independence; for, considering that the Dutch and the Belgians inhabit the "Low Countries," or "Netherlands," and that, in truth, they have to protect themselves from the incursions of the ocean by large dam-dykes, we should expect them to have the smallest development of the organ of the Love of Physical Heights, or of Self-Esteem, of any nation under the sun. If Spurzheim be right, the Dutch and Belgians should be miserably deficient in Concentrativeness or Inhabitativeness, for he observed that the organ *number three*, produced the love of physical heights. Now, we will venture to say, that the Dutch have larger Concentrativeness in development, and more industry, and love of pursuit, and permanency of institutions, in point of fact, than nations that live a thousand feet above the level of the sea; and we think that this one circumstance is conclusive of the whole matter. At the same time, it is proper we should add our conviction, that the simple function of all the organs in man, is to be best ascertained by watching their manifestation in the lower animals, and that a physical use will be found to be the first and fundamental direction of all the passions. We observe that the love of height or elevation relatively to others, is very frequently found in connection with this organ. A German who received a wound at this part, felt himself upborne to the clouds, and made paste-board wings in order to fly. This inclination may also be detected in the child who stands on the table to be taller than papa, in the placing of the president's chair, or the throne, higher than any other seat, and so forth. But then, we suspect this is not for physical height, but for distinction; because, it is equally accompanied with a finer dress, a staff of office, a sceptre, or other badges of greatness.

We were at first inclined to suppose, from a careful investigation of the phenomena

will be relieved from the necessity of answering many calumnies, which at present seem only to multiply in the ratio of their refutation.

We would suggest to our fellow-labourers, the necessity of adhering to the classification and nomenclature of Spurzheim, of the Phrenological Journal, or some other well-known standard, until they are altered by some general convocation. Nothing can be more annoying, or indeed more gratuitously conceived, than those changes for the mere sake of changing, which the French Phrenologists have adopted in the order of their systems, and the numeration of the organs, whereby the reader, instead of approaching the perusal of their works with any advantage from his previous Phrenological knowledge, has to unlearn, and begin of new, to a most confused and useless order of arrangement, nomenclature, definition, and numbers. The Americans are likewise not altogether exempt from animadversion on this account.

Some general understanding among Phrenologists, as to the value to be attached either to the terms or numbers used to indicate the size of organs, is also highly desirable, but is, we are afraid, not practicable; for we observe that each Phrenologist pitches the key of his observations at a different octave, according to the ardour or coldness of his temperament, and the fervour of his modes of expression.

of this organ, that its proper function was to produce the love of equality, or of independence, or rather, perhaps, the sentiment or consciousness of being on a level with others. Veneration, we have reason to think, produces the sentiment of humility, and where it is absent, there will be manifested a total want of the sense that other persons are superior to the individual. But we think there was still desiderated in the human character, the consciousness that the individual was equal to other persons; and that this defect is probably supplied by Self-Esteem. It remains to be considered, and we confess that our observations are not yet sufficiently extended to enable us to decide, whether its proper function be that of the sense of superiority, or the consciousness of equality.

Haughtiness, or pride, in the proper sense of the term, is more allied to a fear of the invasion of an individual's own rights or dignity, than to a desire to look down upon others. We suspect that men have often been supposed to despise others as beneath them, when they were only feeling vehemently that they themselves were equal to any one; and that to produce superciliousness or contempt of others, is required the infusion of Love of Approbation. We incline to think that the primitive manifestation of this organ, is to be found in the sentiment, "I'm as good as you." It seems to be the prompter of the levelling system, of the agrarian law, of republicanism. That man is not proud who looks upon himself as equal to the king; he is only contending for equality. The proud man is he who looks down upon others, who thinks himself equal to the highest and far above the lowest. Independence, self-action, the liberty of deed and word, which knows no law of others, that would infer a higher authority than itself, seems of the essence of this emotion. The child, by this organ, elevates itself to the condition of its parent, the servant to that of his master, the subject to that of his king. But this may consist most perfectly, with a total want of pretension of superiority or supercilious arrogance. It may esteem itself second to none, without thinking itself above any; and hate servility, and subserviency, and the abjectness of subordination in others, as heartily as it would despise itself for sinking below the level of its own free and independent manhood. It dislikes no man for being equal to itself, but only for aspiring to be above, or for being mean enough to bend below its own level. It likes not to hear that praise of the deeds of others, which places its own condition lower than that of its neighbours; and hence does it create that envy which is jealous of the inroads of distinction or adulation of others, which threatens its own equality or independence. It looks upon praise as patronage, and therefore, as inferential of the flatterer's sense of his own superiority to the object of it. Wrapt up in the sense of its own equality with every or any man in the whole world, it never loses sight of its own consequence or dignity, and thus is apparently regardless of the rank or condition of others. It thinks no man better for his purse or his title, and no man worse for his empty pocket or his homespun duffle. Its sentiment is, that *human nature* is great, and possesses an exalted dignity; it cannot bear that it should be degraded or despised in any of its shapes or aspects. Hence it is, that in all republics and free states, where Self-Esteem is known to be the predominating organ, the value of human life is immense, and the person of a citizen precious above all things; while in despotic countries, where it is much smaller, the people think themselves, and are accounted, no more than herds of cattle, and are estimated almost as a mere part of the soil. Self-Esteem prompts the sentiment,

"I had as lief not be,
As live to be in awe of such a thing
As I myself."

It weighs names independently of artificial distinctions, and finds that Brutus will raise a spirit as well as Cæsar. Above all, it is ashamed that its should be the only age of the world "famous but for one man." It is a Washington, that would neither obey nor govern, but abolish distinctions, and establish the reign of a universal liberty, and its first condition an absolute equality.

Love of Approbation, on the contrary, is always craving for distinction. It would be for ever alone in the public ear, and talk lest it should be forgotten that it is in the company. It desires to be assured that it is better than somebody else; that it outshines others; that it is above competition, or, at all events, that it is not on a level merely with the rest. It is ever seeking to run from the circle in which it is, and to worm its way into that which is above it. It seizes upon all descriptions of

evidence by which it can be assured that others are not so good as itself, and that it is superior to what is round about it. It is miserable when the eyes of an assembly are directed to any object but itself. It would monopolise the attention of the whole world. It would beat everybody at every thing. Like sweet bully Bottom, there is not a character in *la grande role* of society, that it cannot enact better than anybody else; and it is so envious of distinction in every department, that it insists that it can beat all the players in every part, from Pyramus or Thisbe, down to the roaring of the lion, or the beams of the moon, or the rough cast of the wall. Ranks are its idol. They separate it from the class below its own sphere, and when it has succeeded in gaining admission to the circle above it, they serve to assure it of its progress and superiority. It dictates the sentiment of Louis XIV. *après moi le deluge*, and made Napoleon look upon ten thousand men as a few pawns on a chess-board. Joined with Self-Esteem, it makes men clamorous for equality, so long as they are below the level of society, and contemptuous as well as contumelious when they have placed themselves above it. It glories in looking down; while Self-Esteem would look upward, to reduce the mountainous section of the moral geography to the level of the valleys.

We have here sketched, what may be called, some of the subtleties of the functions of these organs, and what, perhaps, may receive some sanction from a careful analysis of their phenomena. But we are not yet convinced that we may not have mistaken the action of the one faculty, for that of the other, in many particulars; and we shall now proceed to describe a few of the appearances presented by the action of Self-Esteem, as more commonly observed.

In proportion as this organ is developed, is the estimate which the individual has of himself. It may, indeed, very properly be called the Sense of Self.

Some children possess a feeling of subordination. They are tractable, and recognise the competency of others to judge for them. Others are froward and opinionative. They cannot conceive that they are dependent or inferior; but petulant, wilful, and self-indulgent, they will do nothing except what they like, listening to no command, and hearing of no law but their own inclination. This is, of course, not to be confounded with the effects of Combativeness or Firmness, which superinduce rage, stubbornness, and the spirit of contradiction. It is merely a self-willed, passive resistance, arising from the sentiment of individual superiority.

In more mature years, it produces pride, haughtiness, disdain, and self-importance. With large Acquisitiveness, it will produce purse pride—with Wonder and Veneration, spiritual pride—with Secretiveness, the individual will pique himself on his cunning and depth—and with Benevolence, he will certainly let the right hand know what the left hand doeth. It is the chief element in self-respect, which values itself upon what it admires in others. If combined, therefore, with Acquisitiveness, it is ashamed of poverty—with Secretiveness, it blushes at being outwitted—and with Cautiousness, it is disgusted with its own rashness.

Where there is a destitution of moral feeling, Self-Esteem only makes a man pique himself upon his eminence in crime. But if he possess honourable and virtuous aspirations, he will feel proud of possessing such sentiments; and the temptations of dishonest gain, or heartless disregard of the happiness of others, will be banished by the fear of self-degradation. It produces great personal independence, and is the very spirit of liberty, which is but a desire that no one shall be superior to, or better than ourselves. It gives us a constant reliance on our own powers, which carries us through life with intrepidity and success. When unregulated by Love of Approbation, it produces an inveterate contempt for the opinion of others. It produces satisfaction with every thing connected with the individual, merely because it belongs to himself. "All his eggs have two yolks." He has the finest children, the staunchest dogs, the best house, and gets no wine at any man's table half so good as his own. So, the captain of a vessel in the Clyde, thought nothing of her when he was first put in possession, but when he came to command her for some time, he pronounced her the finest ship in the river.

The sentiment forms a very common species of monomania. Examples are superfluous, as they must at once occur to every reader.

A deficiency of the organ is productive of injurious consequences; and the individual who wants it, is put out of his proper place in society. We have known several persons who, with the finest talents, the greatest acquirements, and the best moral

character, and social opportunities, have all their lives, from a defective endowment of Self-Esteem, been tossed about as mere hewers of wood and drawers of water, outstripped in general estimation and public competition, by vapid and pompous fools, who had the secret of inspiring the deference of others, by entertaining a high opinion of themselves. It has been well remarked, that if we estimate ourselves more highly than we are entitled to do, the world will, at all events, give us credit for what we are; but, if lower, we shall assuredly be taken at our word.

In the lower animals, it is difficult to distinguish the manifestations of this organ from those of Love of Approbation; and Vimont, the only Phrenologist whose researches enable him to ascertain the difference, by observing the developement, has not noticed the subject.

The organ is large in the head of Haggart and Bellingham; but very small in that of Mrs. H. and Cordonnier. In the latter, the next organ which we have to consider, is very large, while at No. 10, there is a very great hollow.

SECTION X.—Organ XI. *Love of Approbation.*

THIS organ is situated immediately on each side of the last. When Self-Esteem is small, and this propensity large, there will be found a depression in the centre of the upper part of the crown of the head. When the former is large, and the latter small, the head will assume a sharp, or rather conical appearance, in the centre, at this part. When both are large, there is a general fulness and great breadth at this region. Love of Approbation is particularly indicated by breadth at the upper part of the crown of the head.

We have already ventured to conjecture, that Self-Esteem may produce the sense of Equality, and Love of Approbation the love of Superiority; but we are not entirely satisfied that our analysis is correct, and shall not, without a much greater amount of evidence than we at present possess, attempt to disturb the prevailing hypothesis upon this subject, presuming that it is founded upon a very extensive series of observations. We shall, therefore, endeavour to describe, as precisely as we can apprehend them, the function and phenomena of Love of Approbation, as its character has been generally received.

As Self-Esteem may be called Pride, so love of Approbation may be properly enough termed Vanity. When both are duly combined, there results dignity and affability; when the former greatly predominates, there is dignity without affability; and when the latter, affability without dignity. It was said by Dean Swift, of his friend, that he was too proud to be vain; and it is as certain that many are too vain to be proud. As Self-Esteem may be said to be a desire to be on good terms with one's self, Love of Approbation may be defined, the wish to be on good terms with other people. The proud man stands on an eminence like a temple that receives worshippers as its due, but heeds not the incense that is laid upon its altar; the vain man is like the poor Carmelite friar, that ministers in the chancel, who goes with his scrip from door to door, seeking praise for alms, and ready to accept of all the variety of contributions that are offered him. The proud man lives altogether upon himself, the vain man upon others; the former cares neither for your praise nor blame, the latter cares for nothing else; the one is self-supported, the other, like the inmate of a work-house, is maintained entirely upon charity. If you blame the proud man, he despises you; if you censure the vain man, he fears you. The former would feel himself as great in rage, as on a throne; the latter would be miserable, if his exterior in decoration, class, accomplishments, or person, were not pleasing or attractive to the taste of others. The *proud* vain man courts applause, and when it is given, receives it as what he is entitled to. His Love of Approbation is miserable at your neglect or censure; but then, his Self-Esteem despises you, and still supports him in his own opinion of himself. But the *purely* vain man feels not thus. If you blame him, he has no innate consciousness of greatness—he possesses no internal flatterer—he cannot despise you or your opinion—he sinks under censure, and neglect makes him miserable. The proud man loves power for dominion. The vain man loves it for distinction. When the former is a king, the love or hatred of his subjects gives him no concern. When the latter is an emperor, he lives upon fame;

is fond of incense and flattery; letting any man govern, provided he himself be applauded. Coriolanus is nearly a pure specimen of Self-Esteem; he would not deign to humble himself for a moment below the level of other men, by even asking, *in solicitation*, his fellow-citizens for the consulship. James VI. is an example, nearly as little adulterated, of Love of Approbation. He had no dignity, no self-reliance, almost no self-opinion. He let others rule, and busied himself only about some musty controversy, by which he might get the applause of authorship, or some clumsy attempts at kingcraft, in which he was always over-reached, but never undeceived. The proud man loves the sceptre, the vain man the crown; the former, the sway, the latter, the title; the one to command, the other to hold a court; the first to be obeyed, the last only to be admired.

As a general rule it may be stated, that we expect others to be most pleased with that which, in their circumstances, would most conciliate ourselves. The direction in which Love of Approbation will act, must, therefore, depend upon other faculties. If Benevolence be very large, the vain man will cordially perform deeds of charity that may be seen of men; and, although essentially kind, he has no idea of not letting his left hand know what the right hand doeth. His name will be in subscription lists; and the continual practice of publishing these records of munificence, is an oblation, perfectly well understood, to the Love of Approbation of the contributors. If the vain man possess Veneration, he will not, when he goes to worship, retire into a corner. He will take the front of the gallery, and his responses will be loud and audible. Should he be the slave of the propensities, he will be ostentatious of his intrigues, fond of a smile from the great, and will bawl "good day, my lord," to a nobleman, in a thoroughfare, like a town-crier. The organ is a powerful stimulant of wit and humour. The laughter of an audience brings out all its force, and it returns to the charge animated, to set the table in a roar. It is, of course, the prey of gross flattery, which, judging of the tastes of others by its own, it returns with interest; and the knave, while he wheedles the vain, says to himself, "thus do I ever make my fool my purse."

It is mainly through the power of this organ, that no man can look another in the face, and tell him an unpleasant truth, or ask a favour. He attends to everybody's business rather than his own, is fooled into cautionary obligations, and is cajoled to put his name to bills. Firmness and Self-Esteem would enable him to resist, and give him an air which would inspire in others so strong an impression of his sense of personality and independence, as would at once awe them from the asking of favours. The very manner and aspect of the proud man, guards him from all encroachment upon his goodness, convenience, or condition; while Love of Approbation invites every man to draw upon it who has an object to serve.

The *patient*, for so he may be called, who suffers under the infliction of an undue developement of Love of Approbation, is bound hand-and-foot to the chariot-wheels of the tyrant Public Opinion. His will, which to Self-Esteem is a law, is to him nothing. He has no mind of his own, cannot indulge the luxury of entertaining and expressing his own thoughts, and will follow the multitude either to do good or evil. "What will people think?" is the first question, and the solution of all his doubts. He cannot say any thing that will be disagreeable. Friendship, love, sincerity, are all sacrificed to this Moloch. If he be blamed, he does not hold on his way, but apologises and changes it. If he be censured, he does not, like other men, think it unmerited, and wrap himself up in his own opinion. On bended knee, he implores you to think well of him. Thus can such a man never become a moral censor, or stand up against popular prejudice or injustice; and by such an overwhelming passion is bigotry submitted to or supported, abuses continued, and rights left unasserted or truth unvindicated. No matter how expedient or proper a measure may be in itself, if it be unusual, queer, a thing that has not been done before, if it will make the people wonder or stare, it must be abandoned.

Love of Approbation delights in fine equipages, services of silver, cloth of gold, all those particulars by which other persons may entertain a high opinion of the individual. It stretches the neck far out of the newly kept carriage, to kiss the hand to all who may see that it rides in a coach. It is more busy in bowing to acquaintances, when it is walking with Sir Harry. It talks for ever of its goodness and greatness, that it may astonish others with its perfections. It is far more fertile in promises than in performances; and binds itself to serve everybody, while it never

can execute its engagements. It lives in the public eye, and can never exist out of the sunshine of popularity. It dresses for company, decorates itself for others, and spreads all its charms for the million; while, in private and unseen, it may be mean, disorderly, and tatterdemalion. Self-Esteem, on the contrary, is as respectful of itself as Love of Approbation is of others. No stranger evokes from it a single additional smile or elegance. It is never taken at unawares, for it dresses, dines, and lives to please itself, and that is a more fastidious master than any other. In solitude, it is as punctilious and scrupulous as in a crowd. It fears its own reproof, and dreads little that of others.

The effects of these organs are very remarkable in public speaking or acting. The man with large Self-Esteem and moderate Love of Approbation, is not incited by his audience at all. He speaks to please himself, not them. He *demand*s a decision in his favour, while the other humbly *submits* what he has to say, and *entreats* a favourable consideration. The one tells you that you dare not deny him, the other implores you not to refuse. Upon the one, groans and cheers have no effect; they decide the fate of the other. The former speaks to empty benches as well as to a crowd; unless there be crowds, and these applauding, the latter sinks at once. If the one have said something which excites laughter or applause, he thinks it only his due, and does not wander an inch out of his way to dwell upon the topic which has caught the public ear; if laughter or cheers follow any thing the other man says, he is in danger of losing the thread of his discourse, and often spoils a palpable hit by being tempted by praise to make too much of it. Should Love of Approbation be larger than Self-Esteem, the individual will be affable, polite, "familiar, but by no means vulgar;" dressy, showy, fussy, mighty agreeable, neither distant nor supercilious, and hardly with even the semblance of pride. But he is easily offended, touchy, and not to be slighted with impunity, being greatly afraid of being unnoticed. Where Self-Esteem is larger, but not in a very great degree, the result upon the character will be, as is so well described in these words:—"There will be a keen sensitiveness to the opinion of others, which will appear more in fear of slight or censure, than love of praise. It gives him more pain to be underrated, than pleasure to be admired. He will be prompted to acquire accomplishments, not that he may display them, but that he may not be thought to want them. He will think it beneath him to show off his knowledge, but will be pleased by any accidental discovery of his attainments. He will not seek applause, but he will be anxious that it should be brought to him. He would be ashamed to show that praise pleases him, but would be chagrined were it withheld." The distinction betwixt Self-Esteem and Love of Approbation, may be readily traced in the national character of the French and English; in the former, Love of Approbation predominating, and in the latter, Self-Esteem. An Englishman would be polite to a lady, simply to maintain the dignity of his own character; while the amiable attentions of the Frenchman, would result from an anxiety to show how gallant he is.*

Among the insane, this organ is frequently developed to an extent which produces the exhibition of the most extraordinary airs and fantastic dresses. Men possess Self-Esteem generally, in greater relative endowment than Love of Approbation; while, in women, the preponderance is reversed; and, accordingly, the latter are more frequently insane from vanity, and the former from pride. Lear was "every inch a king;" while Ophelia, dressed in straws, calls in a simper for her coach.

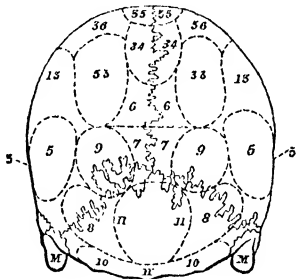
The Celtic races seem to be very fond of fine dresses and gaudy colours, tartans and feathers, &c. We should be inclined to suspect them of vanity, with large

* We cannot help suspecting, that the national character of the inhabitants of these kingdoms has been misunderstood. The natural disposition of the Englishman, is to exclaim, "I'm as good as you." He would be ashamed to call himself *better* than any one else. "Natural free-born Englishman," is his cant phrase, and equality is the philosophy of all his sentiments. What other people take for his pride and cold superciliousness, is, in truth, a manner dictated by a desperate fear of letting himself down below the level of the company. John Bull guards his equality with the same jealousy as a hen does her chickens, or ladies of a certain age, their virtue. He constantly seems to attack, when he only means to defend, and for ever carries himself in the "Marry, come up" style. His contempt for Jean Crapaud, is only in self-defence, or because he thinks Monsieur cringes and bows too much, when he should be asserting liberty and independence. The Frenchman, on the contrary, is for ever struggling for distinction and superiority; he calls the people *canaille*, and speaks of the *bourgeoisie* with contempt, as if they did not constitute the most important part of the nation.

Combativeness and Destructiveness, rather than of pride. Their base and abject submission to the feudal system, and implicit assent to the most cruel and arbitrary authority on the part of their chiefs, does not look like the spirit of pride or independence. In all other savages, indeed, the organ of Love of Approbation is equally predominant over Self-Esteem, and is manifested in ear and nose rings, feathers, tattooing, putting wood in the lips or ears, and so forth.*

The lower animals are endowed with a considerable developement of this organ. The dog, horse, or mule, are charmed with praise; and when adorned with trappings, the two latter exhibit symptoms of high satisfaction. In cavalry regiments, the caressing of the horses is a frequent order of the commanding officer. Some dogs are insensible to caresses, and are surly and insubordinate even to their master; to their own species they pay no heed, and trudge on, regardless of the most fawning endearments. Others, on the contrary, are charmed with praise or when stroked and patted, and return the flattering gambols of their companions with evident satisfaction.

The diagram here presented from Vimont's collection, indicates accurately the seat of the organ in the human skull.† It is there numbered 33.



SECTION XI.—Organ XII. Cautiousness.

This organ projects at the top of the back part of each side of the head. It is situated near the middle of the parietal bone, as generally described, where the process of ossification commences. It is very conspicuous in the infant's skull, and its centre is the exact point from which the ossification radiates.

"Man and the lower animals," says Vimont, "share the endowment of several faculties necessary to accommodate them to external circumstances. In some tribes, as I have already remarked, to fly at the approach of every object, the least likely to give them annoyance, is their only resource; while others, not contented with merely running away, have recourse to a thousand turnings, windings, and stratagems, to deceive their enemy. In these latter, there is a ruling faculty prompting them to be for ever on the watch, and to surround themselves with a thousand precautions, even where danger is not in the least to be apprehended. Animals endued

* In the American Indians, who have been called proud Stoics, No. 11 greatly exceeds the size of No. 10. But it may be seen, that all their hauteur is for show, and all their Stoicism, even at the stake, is for effect. The New Zealanders alone possess predominant Self-Esteem—a race, whose enormous heads, and whose large anterior lobe, and ample coronal surface, promise to make them, at some period, we hope not very distant, the wonders of the world.

† The numbers correspond with Vimont's description of the seat of the following organs:—

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|-------------------------------------|--|
| 3. Destruction. | 11. Attachment to the Produce of Conception. |
| 5. Courage. | 13. Circumspection. |
| 6. Choice of Places. | 33. Vanity. |
| 7. Concentration. | 34. Self-Esteem. |
| 8. Attachment for Life or Marriage. | 35. Firmness. |
| 9. Attachment. | 36. Conscience. |
| 10. Reproduction. | |

with this instinct, are, with good reason, called cautious or circumspect." He then details the various precautions and stratagems of the wolf and the fox, to secure the safety of their dwellings, and to provide against their enemies; the doublings of the hare, and the vigilance of the ravens, who distinguish a gun from a stick, flying off at the sight of the former, and remaining stationary on the approach of a man wielding only the latter. From all these circumstances, he infers that conservation is a very different principle from that of circumspection; and that in those individuals distinguished for their foresight, and the ingenuity of their measures of safety, the organ No. 12 is very largely developed. There appears to us, no reason whatever for such a distinction. It will be found that the animals whose measures show most foresight, are just those which combine large Cautiousness with fine intellectual powers, or sagacity, in short; while those which simply run away, possess large Cautiousness and deficient intellectual powers, with small Combativeness and Destructiveness. We know little of Comparative Phrenology, but may safely assume Gall's proficiency on this subject to be equal to that of Vimont. We do lay claim to such knowledge as is derived from a very wide and varied field of practice and experience in Human Phrenology; and we say most unequivocally, that there is no foundation whatever, in the phenomena of the latter, for Vimont's theory. Cautiousness is the largest organ in the infant's head, and still continues large in the child's: yet we know certainly that the latter, although extremely alert at running away, very averse to the dark, and very fond of hiding itself in its mother's lap, is totally destitute of foresight, and distinguished for never thinking for a moment of consequences. It is afraid of present danger, but learns little from the past, and provides nothing against the future. In after-life, when its intellectual powers increase, and Cautiousness becomes less *predominant*, prudence and foresight are the result, combined with a much smaller extent of timidity.

Some writers have defined fear to be a negative quality—the absence of courage; while others would characterise it as a positive principle, making courage the negative. In all these hypotheses, there is, in point of detail, some degree of truth; while, from a want of severity of analysis, they are essentially wrong. It is true, that where the mind is not under the influence of large Combativeness and Firmness, it is not occupied by principles which resist and countervail those feelings of terror which the presence of danger engenders; and, in this sense, it is more liable to the influence, and less armed against the suggestions of fear, which may, to this extent, be said to consist in the absence of courage. It is also true, that, by a certain conventional although not very philosophical definition of the term Courage, it may be said to be the absence of fear; because, where the individual is not filled with thoughts of terror, timidity, circumspection, he is not possessed with any sense of danger; and where there is no consciousness of peril, there can be no room for that poltroonery without which a man's courage is never doubted. But still there is in all this a mistake of words for ideas, deceiving by that most common of all logical evils, inattention to definitions. A man is no more courageous simply by a want of fear, than he is pious when he only does not blaspheme, is benevolent because he has not committed murder, or is social because he is not a misanthrope. The moth that is burned to death by the candle, faces the danger from ignorance of peril; and the blind man walks into the flood, not because he is brave, but because he has no sense of his fate. Both courage and fear are positive qualities. What, indeed, means the dubious and devious struggle which convulses the young warrior, as, for the first time, he is called upon in the field to "flesh his maiden sword," if there be not in the battle-plain of his soul two palpable and positive principles which hold a conflict as deadly as the contending hosts around him, under the banners of one of which he marches to victory or the grave? Suppose courage to forsake him, why does he fly? Although he should not care to fight, yet the absence of bravery should only dictate to him to stand still, not prompt him to the more active measure of running away. As well indeed might it be argued, that the presence of James consists in the absence of Thomas; or, that the cause of a man going south, is simply the fact of his not going north.

We have already alluded to the operation of Cautiousness in children, who are very liable to the suggestions of the sentiment, and in whom the organ is very large. When it is small, children meet with continual mishaps, are found in divers perilous situations, and bear visible marks of the continual occurrence of some disaster or

other. When older, the cautious infant will be found the most peaceable boy in the school; never in a fight, seldom in a scrape, and any thing but "a pest to his mother at home." The man who is unduly under its influence, has, especially if Firmness be small, an interminable hesitation about him, which is extremely irksome, or extremely ludicrous. He cannot open his mouth, without talking in the slowest, most dubitating, and most tedious style. He never can state any thing directly or strongly. He goes back to correct, modify, or weaken every sentence. He avoids the personal pronoun as much as possible; it may commit him. "He is rather inclined to think; he is not sure, at least he would not take it upon him to say; it may be so, but he does not know;" and thus, a statement is bled, and blistered, and poulticed out of its strength, until nothing is left but some feeble truism. These men can never act upon their own responsibility, and are never satisfied with their own opinion. They take every thing *avizandum*, consult everybody, and do—nothing.

The operations of this organ may frequently be mistaken for those of others, particularly of Acquisitiveness. Many persons are more afraid to want money, than anxious to acquire it; saving, not to accumulate, but to "make the two ends meet;" and frugal, more from fear of destitution, than from the sense of economy. Assure them of the means of existence, and they will save no further, being rather anxious to secure what they have, than to venture for ten times more.

When Hope is small, this organ operates unrestrained by its only efficient check, and it then begins to dread, to anticipate evil, and always to fear the worst. It is this combination which produces the habitual croaker. When its excess is still greater, and Hope still less, it produces hypochondria, nervousness, melancholy, blue devils, the horrors, and very often indigestion or dyspepsia. This last effect, we presume to arise from the depression of the whole brain, and consequently, of Alimentiveness, which results from lowness of spirits. The same combination produces anxiety, restlessness, or despair, and suicide, especially when accompanied with powerful Destructiveness. The desire of self-destruction is a disease which is hereditary, manifested frequently in all European nations, even through four generations, sweeping off whole families, and extending even to collaterals. Gall uniformly found these cases indicated by very large Cautiousness and small Hope. We have often, on finding this combination, predicated extreme lowness of spirits, and the individuals have solemnly assured us, that they had frequently meditated suicide. When both organs are small, the individual will probably be neither merry nor sad. He will be little prone to sentimentality, but as far removed from cheerfulness.

The Germans, English, and Scotch, possess large Cautiousness. Its prevalence in the latter is proverbial. In the French and Turks, it is supposed to be much smaller; while in the Hindoos, the Cingalese, the Canadians, and Papuans, it is largely developed. The observations have not been such as, in many of these cases, to enable us to form an accurate conception of the degree in which developement corresponds with character. In Robert Bruce it is largely developed; and, bold and resolute as he was, through immense Firmness, Combativeness, and Destructiveness, it is certain that he never left to chance, what could be achieved by circumspection.

Where Cautiousness is small, the individual never thinks of consequences. Results in futurity never trouble him. He runs all sorts of risks, and precipitates himself with inconsiderate rashness into danger. It is to-day with him, and there is no other; sufficient for it, is its own evil. He runs in the dark, and gropes none, breaking all that comes in his way. Misfortune bursts on him with the unexpected suddenness of a meteor, because he never provides for difficulties until they are at the door.

Although these are, undoubtedly, genuine phenomena of this organ, or of its absence, we are not satisfied with the analysis of its function which has been generally received. Fear, which Mr. Combe believes to be the primitive function of Cautiousness, is, in any degree of it, disagreeable or painful; and we do not conceive that pain is the genuine effect of the action of any organ, exercised to however great an extent. It is not difficult to perceive, that the larger an organ is, the more susceptible it must be, either of agreeable or disagreeable excitement; because, the more powerful, the more sensitive it must be. But this is altogether a different proposition from that which would maintain, that a disagreeable state of the organ is the invariable result of its activity. We are inclined, therefore, to suspect, that fear is not the primitive function of Cautiousness, but is, on the contrary, the result of a

disagreeable affection, or depressed action of the sentiment. Anger is the result of Destructiveness, but not the ordinary function of it. Its *function* is to destroy, or rather to desire change. Anger, indeed, is the disagreeable or unsatisfied state of the organ; and when a change has been effected by the destruction of the obnoxious object, passion ceases, and gives way to placid satisfaction. May not fear, in the same way, be the disagreeable or dissatisfied state of Cautiousness ceasing when the organ is in some shape or other gratified? We have long been of opinion, that there existed in the human mind, a principle which might be termed the sense or desire of tranquillity, security, or certainty. Some persons have a continual aspiration after peace, quietness, repose; and others are unhappy only when they cease from troubling. A few there are "of spirit so still and quiet, that their motion blushes at itself," many of a soul that is miserable when out of the busy hum of men. The first love to repose "on the silent sunshine of their own hearts," the latter are all for "guns, drums, trumpets, blunderbuss, and thunder." Some are ready to exclaim with the Psalmist, "Oh that I had the wings of a dove, that I might fly to yonder mountain and be at rest!" Others feel with Zanga,

———"Horrors now are not unpleasing to me:
I like this rocking of the battlements!
Rage on, ye winds, waves roll, and tempests roar.
Ye bear a just resemblance to my fortune,
And suit the gloomy habit of my soul!"

What an exquisite delight do some persons take in the repose of the soul, the siesta of nature on a summer's eve, the resting of the moonbeam upon a violet bank! How they luxuriate in not thinking, and in feeling only that they are not at the trouble to feel! How they bask in the rays of inactive, dreaming contemplation, exercising no faculty articulately, but running down the smooth, and shallow, and lazy current of an undefined consciousness, possessing hardly a sense of sensation! How does the man of toil and trouble despise, if not hate, these dreamers! He wonders how any one can live a moment out of the world. He has been all his life in strife, and struggle, and turmoil; and, should he live till dotage, he will be a business, and public, and political, and party man to the last, fonder of suspense than of certainty, and if not having any consciousness of security, at least possessing as little the sense of danger. Others would prefer the greatest calamity to misfortune unascertained, feeling that "present fears are less than horrible imaginings," and almost tempted, while gazing on the suspensive dizziness of a roaring cataract or yawning chasm, to leap in, or down, to solve all doubts, and to "learn the grand secret." They feel that it is a consummation devoutly to be wished,

‘By that sleep, to say we end the heart-ache,
And the thousand natural shocks
That flesh is heir to;”

and that it is a serious question,

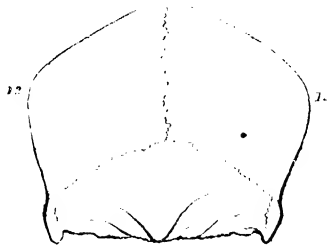
“Who would fardels bear,
To groan and sweat under a weary life,
When he himself might his *quietus* make
With a bare bodkin?”

Nay, even those who run with patience the race that is set before them, would rather be with Christ, which is far better. They love tranquillity, or certainty, more than all earthly things. They "could be bounded in a nutshell!" They would rather have a certain income of one hundred a-year, than a precarious living of three. They retire when they have realised a frugal competency, and labour like slaves, to enjoy an old age of peace, rest, repose, the absence of all that can fright the soul from its propriety.

But it may be said that this would lead to the strange result, that the organ of tranquillity defeats its object exactly in the ratio of its size; and that the more cautious men are, the more disturbed and less tranquil they become. But this argument would indicate inattention to the peculiar nature of the organ. Like all others, the larger it is, the more incessant will be its cravings for gratification, and the less easy will it be to satisfy it. Destructiveness is angry, in the same manner as tranquillity would be disturbed, until it is gratified. If the one be very large, nothing short of a *murder* will gratify it; if the other be so, nothing less than a sea-girt tower

will secure its repose. If the one be only fully developed, it will produce fair resolution to destroy, where that is necessary; if the other be the same, ordinary peace and calm will content it. Benevolence is the desire of universal happiness. But the larger it is, so much the further is it from accomplishing its wishes. Everybody appears to large Benevolence as unhappy or miserable. It magnifies the smallest distress, and exaggerates the slightest misfortune, until, as in the case of Wordsworth, the loss of a red cloak by a little girl, is contemplated as a calamity equally appalling, as to a person of ordinary sensibility would be the ravages of an earthquake. It has the utmost desire for the felicity of all, and the tearing a leg from a fly, is as dreadful as to a smaller endowment of the organ would be the breaking a fellow-creature on the wheel. The cautious man, in like manner, has an earnest and intense desire for tranquillity or security, and therefore, the fall of a tea-cup is as horrible, as to another would be the descent of a thunderbolt, and an impatient word as disgusting as a mortal quarrel. Accordingly, the Scotch and Germans, who possess Cautiousness largely developed, are the most peaceable and tranquil people in Europe; while the French and Irish, who possess it to a much less degree, are never out of a row or a revolution. The Hindoos, who also possess the organ large, are the people, of all the Orientals, who are most enamoured of tranquillity. It is much larger in the female than the male head; and the love of peace and quiet is in women so great, that they would sacrifice any advantage, domestic or political, to avoid civil commotion.

In the diagram here, copied from a skull in Spurzheim's collection, the situation of the organ is accurately indicated.



CHAPTER IX.

GENERAL OBSERVATIONS ON THE MORAL SENTIMENTS.

WE now proceed to the consideration of those organs which are placed in the region of what is called the coronal surface. Their entire mass is comprised in, and measured by, the portion of brain above Cautiousness behind, and Causality in front. The bony ridge which we have already noticed as running from Cautiousness forward to the organ of Tune, indicates with complete precision the base of these organs. They are generally termed the Moral Sentiments; and although those faculties which form moral results are here situated, the name is not altogether correct, as there are several of them which do not in themselves conduce to morality, and are not even entitled to the alternative appellation of superior sentiments, to any greater extent than many of the propensities; which may assist, either in the career of vice or of virtue, according as the balance of the other faculties, and the guidance of external circumstances, have tended to form the character. Thus, Imitation, Wonder, and Firmness, do not, in the ordinary sense of the term, produce morality, although they may assist in maintaining it; and these, together with Benevolence, seem to be possessed by the lower animals. But we must here most solemnly protest against the term "Moral Sentiments," as applied to any one set of faculties more than to another. The expression is unphilosophical and absurd. If this were all, we should

not, perhaps, have quarrelled with it; but unfortunately, Spurzheim, Combe, and the Phrenological world in general, have acted upon the distinction, and have reared theories of ethics upon it, of a tendency, in our view, not less false in principle, than dangerous in practice. The Bible knows no such doctrine as the theory which supposes a *supremacy of the moral sentiments*, as they have been called. It tells us all to come to the *measure of a perfect man*, as the only method of becoming a moral man; and denounces those who are without *natural affection*, or, in other words, who are deficient in Amativeness, Philoprogenitiveness, Concentrativeness, and Adhesiveness, or those who have not fought the good fight and overcome the world (Combativeness and Destructiveness), as equally immoral with those who have neither visited the widow in her affliction, nor kept themselves unspotted from the world. Into this subject, however, our limits will not permit us to enter; and we must, therefore, for the present, leave it.

SECTION I.—Organ XIII. Benevolence.

BENEVOLENCE is situated in the centre of the frontal region of the coronal surface; and its size, in length, may be measured by the quantity of brain above Comparison, extending backwards. In estimating the size of the organ, we must carefully calculate its breadth, and the length of brain backwards from Comparison to Veneration. Let it be remembered, that however high may be the appearance of the head in the coronal region, if the distance from Firmness to Comparison be short, or the brain on the top be sharp, narrow, and deficient in breadth, a deduction must be made from the estimate. Recollect, also, that however fair an aspect the moral region may present, if the brain be shallow above the region, or any part of the region lying above the ridge which runs upon the top of each side of the head from Cautiousness to Tune, the organs of the moral sentiments are of under size.

In the diagram of the head of Eustache (No. 1.) the organ of Benevolence is very large. The dotted line marks the situation of Comparison in this diagram, and in that of No. 2; and the amount of brain above that point in the former, is manifestly enormous; while, in the latter, there is little or none at the front of the coronal surface.

No. 2.

No. 1.



Hitherto we have been engaged in a consideration of those organs which produce the relation of husband (Amativeness and Concentrativeness); father (Philoprogenitiveness and Concentrativeness); and friend (Concentrativeness and Adhesiveness). We have also noticed those which produce society (Adhesiveness); patriotism (Concentrativeness, enhanced by the domestic group); and self-estimation (Self-Esteem and Love of Approbation). It is very apparent, that those propensities, and what have been styled Inferior Sentiments, embrace important

moral duties, and are essential to virtue, producing that enthusiastic love of the objects of the relations before enumerated, which is necessary to the true and genuine responses of the morality of the heart, and not merely of the head. Hence it is, that no people has ever been eminent for virtue and true greatness, which did not nationally possess these organs to a very large extent. Hence, also, it is, that the Slavonic races, which excel the Asiatic so much in the manifestation of the domestic duties, likewise possess a much larger relative endowment of the propensities. It is thus, also, that an individual to be a perfect man, must also be a perfect animal; and that a deficiency of the organs of propensity, is as inimical to the formation of a truly virtuous character, as a deficiency of the sentiments. What, indeed, is all the gentleness, and all the justice in the world, without dignity, emulation, energy, love, friendship, and patriotism? Tell us not of the morality that is without natural affection—of the father that tolerates, but does not dote upon his child—of the husband that respects, but does not love his wife—of the man that lives in society without being social—of the neighbour that is not the friend, or of the citizen who lives in a country, but has no countrymen. Inoffensiveness is not morality, any more than not to hate is to love.

These organs provide for the primary and most necessary relations of life. They continue and preserve the species, stimulate men to congregate, and in social communion to exercise those organs necessary to man's exaltation, which can only be brought into efficient activity by intercourse with his species, and the consequent interchange of thought and feeling. To the perfection of the scheme of human advancement, there was wanting, after these primary relations had been provided for, the creation of yet another and more extended relation, which it was also necessary to establish and recognise. We are children of the circumscribed commonwealth of the domestic hearth, of the same tribe or family, of the same country, and in all these capacities we recognise a related brotherhood. But we are also children of the Father of all, and mankind at large are our brethren.

To inspire us with a practical and abiding conviction of this great truth, and its proper consequences, we have been endowed with the sentiment, designated in Phrenological language, Benevolence. In so far as we have been enabled to analyse the function of the organ, it appears to resolve into the principle of sympathy, spoken of by the metaphysicians.

In treating of the causes which enable the actor to excel in his art, we observed, that although by mere imitation, a performer may have the power of exhibiting the skeleton or bare anatomy of a passion, yet, in order to represent it to the very life, to feel, in short, what he expresses, he must also himself possess in ample endowment the sentiment which he is to portray. Thus, no actor can perform Coriolanus who has not large Self-Esteem; nor Richard, with small Destructiveness; nor Hotspur, with weak Combativeness. We conceive that, in like manner, sympathy, which is admirably defined by the Apostle to be, to "rejoice with them that do rejoice, and to weep with them that weep," is dependent for its proper exercise upon the size of the other faculties. Indeed, it is plain, that in order to feel with another, we must vividly conceive what he feels; and this we cannot do without possessing, in large endowment, the faculties which produce his sensations. If our Destructiveness and Benevolence be large, we will feel deep indignation along with the man who is proclaiming the injuries of the widow and the orphan; if our Destructiveness be small, we shall not sympathise in the indignation of the speaker, but we shall feel with him the miseries of the victims; if our Destructiveness be large, on the contrary, and our Benevolence small, we conceive that he will not make us feel at all. That the power of Benevolence depends upon the size of the faculties in the states of which we are to sympathise, is indeed plain, from the fact, that the more vividly the feelings of the object are presented to us, the more intensely do we feel; as, for example, the enemies of slavery, in order to move public compassion, present pictures of a negro kneeling in chains, or tied up and suffering under the driver's whip. The benevolent man actually and literally shivers with the naked, weeps with the mourner, and feels that knife entering, or fire burning him, which is dismembering or eating into the vitals of another. It is thus that he more acutely feels present and immediate misery, than that which is distant; and that minute details of an actual case of calamity, evoke more tears from the eye, and pieces from the purse, than a thousand homilies on charity.

We are inclined to the opinion, that Benevolence is one great source of national enthusiasm, or that principle which produces sometimes in a whole nation one common sentiment of joy or sorrow; as, for example, upon the news of the victory of Waterloo, the visit of the King to Scotland, or the death of the Princess Charlotte. Of course, as we have already observed, the faculties which produce the joy or grief are also necessary to the production of the sympathy; but we should not expect that, without considerable Benevolence, the states of mind would *be the same in all at the same period*. It would be sufficient evidence to us of a small national endowment of Benevolence, were a people never known as a community to have rejoicing and lamentation together.

When combined with large Acquisitiveness, Benevolence feels for distress, is happy in the felicity of others, is uniformly active, kind, and obliging in its services, but does not like the purse to be touched. It will strain every nerve to perform a good action, sooner than part with one guinea. It may be easily distinguished from Love of Approbation, which often wears this its master's clothes, by one criterion—the latter expresses great *concern* for distress, while the former silently relieves it.

When Benevolence and Destructiveness are both large, there will be bold and energetic exertion in the cause of the oppressed and suffering. Burns had this combination, and its action is finely illustrated in his lines to a wounded hare:—

“Oft as by winding Nith, I musing wait
The sober eve, or hail the cheerful dawn,
I'll miss thee sporting o'er the dewy lawn,
And curse the ruffian's aim, and mourn thy hapless fate.”

We have said that Benevolence is sympathy. Want of Benevolence is therefore not cruelty, but simply the destitution of sympathy, or what is generally termed callousness, or an insensibility to the pain or misery of others. This callousness, when joined with large Destructiveness, produces the accomplished villain, who perpetrates cruelty wantonly, listens with a dull ear to cries for mercy, looks with a placid eye on agony, and murders in cold blood. It was this insensibility which produced the difference betwixt Burke and Hare. The former had to make his feelings drunk, and yet heard with horror the cries of the widow and the orphan. Hare, on the contrary, had no compunctions of this kind; he could not reproduce the sensations of his victims; he “slept the next night well, was gay and merry;” he felt not his victim's fingers on his throat, but that “dead men were but as pictures.”

In insanity, Gall states, this organ is manifested by an excessive liberality and profusion, and by a desire to give away every thing of which the individual is possessed. He observes, that in idiocy it produces good nature and harmlessness; while, where it is small and Destructiveness large, the unfortunate is prone to fits of rage, and becomes dangerous. We confess that we are inclined to distrust many of Gall's observations on the subject of the organs in a state of disease, because they appear to be mere conjectures. He does not detail the evidence on which they proceed, and does not pretend that the cerebral parts to whose action he attributes the phenomena, were examined, or found diseased. The profusion which he attributes to an over-action of Benevolence, may proceed from general fatuity, from vanity, from small Acquisitiveness and Cautiousness, joined with general prostration of reflecting intellect, in short, from a thousand sources instead of that on which he founds his conjectures. We have the more reason to view with the utmost distrust Gall's observations upon this subject, when we find that he designated this organ the seat of the faculty of Justice and moral obligation. While he does so, he very coolly details a great variety of facts relating to its function, totally at variance with his leading definition.

We have said that in Hare the organ was very small. It was very large in Rammohun Roy, Henry IV., Toussaint, and was combined in Cromwell with immense Destructiveness. “His temper,” says Thurlow, “was excessively inflammable; but this flame fell partly of itself, or was soon extinguished by the moral qualities of the Protector. He was by nature compassionate to beings in suffering, even to the degree of weakness. Although God had given him a heart in which there was little room for the idea of fear, except that which he himself inspired, yet he carried to excess his tenderness for those who suffered.” To the eternal honour

of this great man,* be it spoken, that the Unitarian John Biddle, would have been burned, "had not the intolerant fury of some of the Assembly of Divines been curbed by Oliver Cromwell, who rescued him from their fangs, and supported him in exile, till he could with safety return to his native land."

In the lower animals, this organ is said to be manifested in passive gentleness and tractability. It is situated, in most cases, in the centre of the head, somewhat farther up than the eyes, and is indicated by the projection outward of that part of the head, as well as by its breadth. Gall and Combe have frequently, by this criterion, distinguished a tractable from a vicious horse, dog, &c. It is of enormous size in the giraffe, or camelopard, which is the gentlest and most tractable of all quadrupeds.

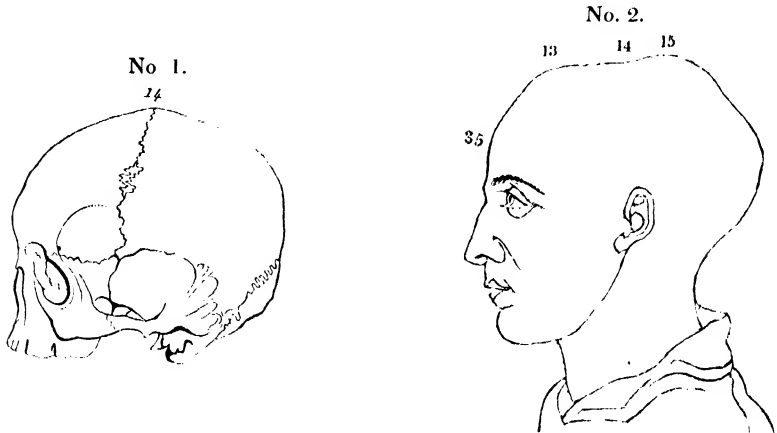
We shall refer further to the phenomena of this organ, when we come to treat of that of Imitation. Gall declares it to be established by a greater variety of observations than those applied to any other faculty. Its activity appears to be peculiarly susceptible of hereditary transmission, as we have perceived its solicitations to be singularly powerful in the children of very benevolent parents at an early age, and even when the development was not so large as would have been inferred from the manifestation. Undoubtedly the sphere of its activity and intensity is greatly enlarged by the size of the other organs, particularly of those of the passions.

SECTION II.—Organ XIV. Veneration.

VENERATION is situated in the centre of the coronal surface, betwixt Benevolence and Firmness longitudinally, and the organs of Hope laterally. If Benevolence and Firmness be very large, Veneration, although fairly developed, will appear as if in a hollow. This is particularly conspicuous in the head of Rammohun Roy. Its absolute size is best ascertained, by measuring its height above the lateral ridges of the parietal bone. It is situated exactly at that part of the head which in infants is left open, where the fontanels appear. In them it is easy to see the head beating, being not then covered with the skull bone. And here it is necessary to caution young Phrenologists against committing themselves or the science, by predicating any thing whatever of the moral sentiments of children. We have already seen, that the order in which the different regions of the brain are developed, is the same as that which marks the progress of the fetal brain. The lowest description of organs are developed first, the highest last. The propensities, therefore, in childhood are in the most perfect state of endowment, the moral sentiments in the least. Although, therefore, it is quite easy to predicate whether a child be passionate and froward, or the reverse, according as Destructiveness and Combativeness are powerful or otherwise, it is very dangerous to venture upon any statement which concerns the moral sentiments, because the manifestation may be very different from the apparent development. At an early age there would probably be very little difference in the extension of the coronal surface betwixt Hare and Melancthon, while the mental manifestations would probably be different to some extent more than was warranted by the discrepancy in the animal region. This would arise from two causes,—the dissimilarity in their education, and the example set them, combined with the constitutional tendencies of each in their respective cerebral developements. Thus, in Hare's head there would be no bias or inclination of nature to make deposits of cerebral matter in the coronal surface, and therefore there would be absent in him that which was present in Melancthon—an extra stimulus in that part of the brain, arising from the *affluxus* of the blood, and other substances, which, deposited, produce organs. This inflamed or increased action of the parts would produce a mental manifestation which would not be recognised in Hare's actions. While we enter this general caution, we would also notice, as a special caveat, that mistakes are more peculiarly to be dreaded in the case of this particular organ, Veneration. The period at which the fontanels close, every mother knows, is different in different

* Thurlow has made a most valuable contribution to Phrenology, in his account of the person of Cromwell, which admirably illustrates the doctrine of size as the measure of power. "The Protector was of a powerful and robust constitution; his height was under six feet (two inches, I believe), his head so large that you would believe it must contain a vast treasure of intellectual faculties."—State Papers, vol. i. p. 766.

children, being sometimes very early, and often very late. When they are late, of closing, of course, the bone will be much thinner than in those cases wherein they have ossified early; and thus, a mere osseous deficiency may be mistaken for a cerebral want. In the diagram of a Papuan skull, from the collection of Vimont (No. 1), Veneration is large; while in the other (No. 2), it is shown to be smaller than Benevolence and Firmness.



We have already considered the functions of an organ which has for its object the sense of self-importance, exaltation, or pre-eminence. We observed that it superinduced superciliousness, or the sense of personal elevation, and of surrounding littleness. The want or deficiency of this organ, of course, produces an absence of pride, and of the sense that we are superior to other men. But we have seen that the default of one organ never produces its opposite. Deficient Destructiveness does not produce kindness, nor small Benevolence cruelty; the former state only results in harmlessness, and the latter in callousness. We therefore incline to the opinion, that although the absence of Self-Esteem may present a destitution of pride, the supervention of another principle is wanted to produce humility. This principle we believe to be what has been called Veneration, but which, we suspect, when properly analysed, to result in the sense of littleness, inferiority, or worthlessness. When we minutely examine the feeling of respect, we find that it consists, not so much in a magnifying, on our part, of the importance of another, as in an enlargement of the sense of our own littleness. "What is man that thou art mindful of him?" "Lord, I am not worthy that thou shouldst enter." "Except ye become as one of these little children, ye shall in no wise enter into the kingdom of heaven." In cases of religious insanity, it may be observed, that the point on which the derangement turns, is the insignificance and utter worthlessness of the individual, his total want of merit, or consideration, or fitness for heaven—the conviction that he is a wretched worm of the earth, the creature of a day, and the heir of perdition. Such persons will be found continually to be a great deal more ready to degrade the condition, and debase the character of man, than to exalt their conceptions of the attributes of God. The whole theory of devotion is centred in the proposition, "by grace are ye saved, not of yourselves, lest any man should boast." The staple of prayers is, in truth, an acknowledgment of unworthiness, sin, and transgression; prostration being its symbol, and abasement its head and front. When too large in comparison to other organs, it cannot practically contemplate God as he is revealed in the Bible, the Creator of man, and therefore his Father, to whom he is to approach with the docility, but at the same time with the affectionate confidence of a child to his parent, whose spiritual image he is. It rather looks upon itself as a vile worm, not fit to live, or to stand in the light of its Father's countenance; if, indeed, it dare call him by such a title, instead of the stern avenger of sin, and the jealous and wrathful governor of a rebellious and conquered province.

Respect for superiors is in a great measure, although not altogether, to be traced to this feeling, because, bowing and scraping have their source in the sense of inferiority. The idea of being low, or base, is of course assisted, above all things, by such an idea of the greatness of others, as will by contrast show the individual his own littleness; as we obtain the greatest conviction of the depth of a valley, by comparing it with the surrounding mountains. There is no sentiment, however strange it may seem, in which greater delight is indulged, than in the sense of our own insignificance. Some persons cherish this conviction of worthlessness as their dearest assurance. They rally round a great man that despises them, and prize themselves upon abjectness. It is this which produces the barefoot pilgrimages, makes kings and princes walk tattered and uncovered to Notre Dame, and induces emperors to fly to hold the stirrups of a saint, or kiss the toe of the Pope; turning crowned monarchs into tailors and mantuamakers to the images of Christ and the Virgin.

The martyr to Veneration, filled with the sense of his own deficiencies, thinks he can do nothing. He cannot understand how society should admire his works or his speeches; he sits on the corner of his chair, and slips near the bottom of the table. His parents he obeys scrupulously, and is diffident before them even in his manhood. Long after he has left school, the master's eye revives the instinct of subjection; and when he becomes a clerk or shopman, he falters when he speaks to his employer. In courts of law, if an advocate, he speaks to the judge as if he himself were nothing, and too often permits the independence of the bar to be trodden under foot of the overbearing insolence of the bench. Sir Walter Scott possessed the most enormous development of this organ which is to be met with in Phrenological experience. His distrust in the success or ultimate fate of his own works, bordered on extreme weakness; and he uniformly depreciated mere genius or authorship, looking upon an earl or a duke as something far above a great writer. Had he been a duke, and not a genius, he would have just reversed his standard of consequence.

In the preacher, the power of Veneration is principally to be detected in the absorption of his mind with the thoughts of his own profligacy, and the innate baseness of his kind. He sees no reason for contemplating men as any higher than gnats, or their perdition as any more than the annihilation of so many ephemerata.

When combined with large Self-Esteem, the organ only shifts its ground. It will not bow before any one that can be measured by it, but it will contrast itself with some being far beyond its own station, as the king, persons in authority, or parents. "Call no man master, *but Christ*." "Kneel not to man, but to God only."

It is a shrewd and, we think, a correct remark, that no man can inspire respect in others who does not feel humble himself. Humility in him, produces humility in us; and thus, a mental deference is created. The *brusque* and "hail-fellow-well-met" style of behaviour, disgusts everybody; or, at least, never fails to set other men completely at their ease, and to incite them to treat the person who acts so entirely *sans ceremonie*, with that familiarity which is said to breed contempt.

Although Dr. Gall first observed this organ large in religious fanatics, and therefore supposed it to be the sentiment of religion, Dr. Spurzheim very properly remarked, that its primitive function could not have reference solely to the Deity, and, accordingly, found it large in the head of an Atheist. If the analysis above suggested be correct, it is clear that another organ is necessary to produce piety—that of Wonder (No. 18); to which we would now request the reader to turn his attention, before proceeding to that which is next in mere numeral order.

In the choice of servants, it has been found, by many Phrenologists, important to bear especial reference to the size of this organ, as necessary to produce respectful obedience. Mr. Combe has found Veneration large in the head of the genuine Tory, and smaller in that of the Whig or Republican. According to our observation, Radicalism, as a genuine feeling or sentiment, and not a mere philosophical principle, is always the result of only an average endowment of Veneration, with large Self-Esteem.

Vimont, upon whose authority we must principally depend in all matters relative to Comparative Phrenology, has not found in the lower animals any organ or convolution appropriated to this faculty. Broussais, however, infers its existence in them, from an analysis of the mental manifestations. He points out the fact, that they employ chiefs or leaders, to whose signals they offer the most implicit obedience.

He observed, he says, in Spain, when with the army, that the mule paid the utmost deference to the horse; and in birds, found that a chief always led and governed the rest. "Of all animals," he continues, "the dog is the most remarkable for his veneration towards man. He distinguishes perfectly the rank of each person in the house. He puts the master at the head; he knows that the children of the family ought to be more respected than those of strangers; the servants he places a degree lower; visitors are entertained according to the consideration with which they are treated by the master; strangers are put a stage lower, and even amongst these latter, those who are better dressed or better looking, are received with a much smaller grudge than those who are shabby or present a suspicious appearance."

We had particular occasion to observe the character and conduct of an individual to whom we were nearly related. We remember that his Veneration was large. At the age of sixty, he spoke of his father with the greatest enthusiasm and most profound respect. He was by constitution pious, and inclined to Toryism, looking upon the rabble with distrust and contempt, and constituted authority as a thing that must be obeyed. Upon inspecting his repositories, we found carefully preserved a lock of his mother's hair, forty years kept; his father's last pen, for about the same period; and the first card of invitation which he had received from a friend of thirty years' standing. We remember that, up to the time of his death, he used to weep upon hearing the music of Correlli, to which he was accustomed in his youth; and that his references to Shakspeare were chiefly directed to those passages which dwelt on the past, and which suggested old associations. His love of all that had gone by, was only equalled by his contempt for the present and the future. The first actor he saw was always the best, and the oldest book the most interesting. Nay, he even purchased the very elementary volumes he was taught at school, and read them over again with delight. This love of recurring to the past, was uniformly accompanied with a most passionate respect for parents, or for the persons with whom he was connected in his infancy and youth, and with a tendency to preserve memorials of it and of them. Now, other Phrenologists have traced the love of relics to Veneration; and Sir Walter Scott, who possessed a developement of this organ far greater than any that we ever saw, loved above every thing else, by-gone days, friends, books, customs, and objects. We have already expressed our opinion that this sentiment probably arises from Concentrativeness; but we are bound in justice to other Phrenologists to notice the apparent relation betwixt Veneration and the sentiments above described.

A third view is taken of this subject by an anonymous correspondent of the *Phrenological Journal* (No. 53, p. 61). He is of opinion, that "a feeling for the past, or a direction of the mind to what was gone by," is the function of that organ marked unascertained thus (?), which is supposed by some to be the back part of Ideality, or that part to which the sense of the Sublime is sometimes assigned. He found it large in his own head, and that of other persons in whom the emotion of the past was powerful, and refers to Scott's works as a strong indication of the sentiment. He also adverts to its manifestation in Gray's *Elegy* and "*Auld Langsyne*." In the bust of Scott, this organ is large; but in that of Dr. Chalmers, in whom this manifestation is not very prominent, it is far larger. We cannot offer any very decided opinion on this subject, and shall only in the meantime call the attention of our readers to the following quotation, as a singular corroboration of our views in reference to the function of Concentrativeness:—"I also watched the character of persons whom I had previously known as having the organ marked No. 3 large. There were three of them, and they were pretty constantly under my observation. I did not, however, discover any thing in them, further than that they all seemed to want a varied memory; or, in other words, when their minds were fixed upon one particular object, they forgot every thing else; and also, that they had a *peculiar love* for reading books over again which they had before read. Two of them had favourite authors, which they read once every month." This exactly corresponds with our analysis.

SECTION III.—*Organ XV. Firmness.*

THE organ of Firmness is situated at the very top of the head, at the posterior part of the central ridge of the coronal surface, midway exactly betwixt the posterior

angles of the organs of Cautiousness, commencing immediately behind the last organ, and terminating at Self-Esteem. Its height above Cautiousness is the criterion of its size, length and breadth being, of course, to be included in the estimate. The heads of Martin and Millar exhibit a high endowment of it, and its degrees of development are well contrasted in these diagrams.



It will be recollected, that when we treated of the subject of the Temperaments, or elements of physical constitution, we enumerated four descriptions or qualities of brain—the Nervous, Sanguine, Lymphatic, and Bilious. We also mentioned, that we inclined to the supposition that the Bilious Temperament meant, with regard to the corporeal details of the system, muscularity, hardness, tension, durability; and that wherever Firmness greatly predominated in the brain, the Bilious Temperament prevailed in the physical economy. We are therefore inclined to think that this organ produces the tendency or power of keeping the others in a state of activity after they have begun to operate; and to produce the faculty of continuing their action after it has commenced. It indicates a texture of brain capable of sustaining great fatigue and withstanding exhaustion; and thus it produces endurance, perseverance, and obstinacy. We have already spoken of the desire or love of pursuit given by Concentrativeness. Firmness commands continuity of emotion, sentiment, or thought, even where there is no pleasure in the pursuit itself, often where it is disagreeable, merely because that which is begun must not be changed. What metaphysicians term the Will, seems to be simply the existing state of the faculties of the mind. The province of Firmness appears to be to keep that state permanent, and to prevent a change in the direction of the activity of the organs. Thus, Combativeness active, produces the will, desire, or resolution to oppose or to fight. Where there is danger, Cautiousness struggles to be exercised, and prompts its owner to run away. But Firmness maintains the ascendancy of Combativeness, and preserves it in predominating activity. Even where Cautiousness does not exist, Combativeness may be fatigued or worn out by opposition. Firmness, however, supports it, gives it a more perdurable texture, and sustains its action. Self-Esteem is stimulated disagreeably by a slight or insult, but tires of taking offence, and would relent or forgive. Firmness maintains the state of offence, and keeps alive the sense of insult.

We have said that Concentrativeness gives delight and pleasure in plodding at the business or occupation in which we have embarked, and satisfaction in the pursuit of any object or study, simply because we have been engaged in it; the pleasure being, of course, much enhanced by its embracing the exercise of the predominating organs. We have also conjectured, that Destructiveness produces the desire of change for the mere sake of mutation. But these, although framed to balance each other, are not sufficient to make up the sum of that section of human action, which embraces the fixity or mutability of desire. We must sometimes hope against Hope,

or rather, when Hope is excited, and circumstances awaken Cautiousness and make it struggle for predominant action, some principle is demanded, by which the empire of Hope may be fixed and consolidated, the usurper, despair or Cautiousness, subdued, and the citadel of the regent passion rendered impregnable. This function is supplied by Firmness, which maintains in action whatever state of mind happens to exist. From defect of it, Mrs. H., mentioned in the *Phrenological Journal*, could never decide upon any thing. If the current accounts of the late Chancellor Eldon be correct, he should have possessed large Cautiousness, Acquisitiveness, and Concentrativeness, with small Firmness. He attended to and knew nothing but his profession, loving it passionately, and despising every thing else. But he was so irresolute and dubitating, that it was jocularly but illustratively said, "he lay a-bed for hours, debating which leg he should first put through his small-clothes."

We have already seen, that Secretiveness suppresses the manifestation of organs which solicit gratification, and Firmness maintains in exercise others which are required. These organs thus, by a different process, can beautifully fulfil the same design; the one by *suppression* of faculties, the other by sustaining the *activity* of their opposites.

This organ renders a man indefatigable and indomitable. His mind is iron, and his intellect seems to have need of no rest, and to permit none. As the drop wears the stone not by force but by frequent falling, Firmness accomplishes purposes which the greatest energy and finest genius have failed to achieve. When combined with Destructiveness and Self-Esteem, it will produce decision of character and vindictiveness, rather than that calm and patient perseverance which is generally found in greatest perfection where Destructiveness is only of moderate size. This latter combination produces that sort of character which makes no noise or bluster, and appears to yield to every thing that is said, while it quietly but directly takes exactly its own way. When too large, Firmness produces stubbornness, obstinacy, and infatuation. Conduct is rendered immutable not by a sense of duty, right, or necessity, but simply for the sake of being positive, determined, and unyielding. Men of such a temper will not listen to reason, they cast aside common sense, and nothing whatever will awe them from the career of their humour. About the merest trifles they are obstinate. They will stickle about a straw, and they abhor "to give in." They suppose that it is a disgrace to yield. "I don't care a farthing about the matter, but why should I give up, when I know I am in the right?" No matter what the subject is, no matter how near and dear the individual may be to the positive man,—wife, child, friend, master, all are forgotten in the gratification of Firmness.

General Jackson possesses an enormous development of this organ, and is singular for his obstinacy. The Spaniards and American Indians are equally distinguished by the size of the organ and the strength of its manifestation. In all these cases, the Bilious Temperament confessedly predominates. A highwayman, after being often put to the torture to discover the names of his accomplices without effect, at last hanged himself; and the skull at Firmness was found actually to have split open. Thurtell, whose resolute murder of Weare was not more signal than his vindictive satisfaction with the deed after it was committed, had very large Firmness, as had also Haggart and Robert Bruce.

In the lower animals, this organ is a distinguishing characteristic of various tribes, in whom it makes up for the want of swiftness, and shows that Firmness levels all distinctions, and is more than a match for all disadvantages. The horse often takes stubborn fits, as also does the ass; but no animal is so remarkable for its obstinacy as the joint produce of these quadrupeds—the mule. Hence, to be mulish, is a phrase. "Vimont," says Broussais, "has admitted the existence of Firmness in the fox, cat, and dog. He observes, that the cat remains watching for whole hours in the same attitude. This is certainly not from slowness or laziness. All animals of the feline tribe, are the *most agile, and the most muscular of quadrupeds*." "It is not therefore from dulness of temperament that these animals lie so long in wait for their prey." This association of Firmness with the highest order of muscular power, is strongly corroborative of the theory of the Temperaments which we have ventured to propound above.

SECTION IV.—*Organ XVI. Conscientiousness.*

THE organ of Conscientiousness is situated on each side of Firmness, above Cautiousness, and backwards from Hope, at the posterior verge of the coronal surface. Its size is best ascertained by the quantity of brain immediately upwards from Cautiousness. If from the region of Hope the head rapidly slope towards the back, as in the bust of Dr. Dodd, the organ is small. It is very necessary to observe, that Firmness, if large, forms a good landmark to determine the size of this organ. Should the head be flat, shallow, and slope rapidly from Firmness down to Cautiousness, then is Conscientiousness rather deficient. Firmness, when very small, as is often the case with children, sometimes gives an appearance of roundness to Conscientiousness, which does not arise from its own protuberance. The organ must therefore be always measured with reference to its height above Cautiousness, and breadth to Firmness.

There is no subject upon which metaphysicians have differed more widely, than that of Conscientiousness. Some have contended that mankind are regulated by selfishness; others by praise; many by sympathy; not a few by what is called the fitness of things; while Cudworth, Hutcheson, Reid, Stewart, and Brown, maintain the existence of a single innate original faculty, called the Moral Sense, which produces the sentiment of Justice, of Right and Wrong, of Incumbency, of Duty. The disciples of Phrenology, with the exception of Dr. Gall, also assert the existence of such a principle, and name it Conscientiousness. Some of them, however, have not stopped here, for Mr. Combe states very broadly, that all metaphysicians who do not admit the existence of such a faculty, must be deficient in Conscientiousness themselves; while many "contend most eagerly and eloquently, for the existence of an original sentiment or emotion of justice in the mind, altogether independent of other considerations; and this is the natural feeling of persons in whom the faculty is powerful." With all the respect to which Mr. Combe is entitled, we are bound to say, that the science is not likely to be promoted by imputing dishonesty to those who presume to entertain their own opinions upon metaphysical doctrines, or by propounding a theory which is so manifestly preposterous, as that every rogue who is clamorous about conscience, or writes eloquently about it, is therefore an honest man than he who, upon most logical grounds, denies the existence of any innate principle of justice. At the risk of being placed in the same moral category with Paley and Gall,* we must venture to dispute the received opinion altogether.

"Another difficulty," continues Mr. Combe, "is experienced in the doctrine, that Conscientiousness is merely a sentiment, and does not by itself lead to the perception of what is just. This will be best removed by an example. A judge hears one side of a cause, and Conscientiousness, acting on the statement presented to it through the medium of the intellect, produces the feeling that this party is in the right. The other litigant is heard, new facts appear, and Conscientiousness may now produce the feeling that justice lies on his side. If this faculty itself had formed specific ideas of what is just, it would have been an intellectual power, and reasoning would have been in proportion to it, which is not the case; but as it is only a sentiment, its real function is to produce an emotion of justice, or injustice, on the particular case or assemblage of facts being presented to it by the intellect." This is certainly the most extraordinary proposition which we have yet encountered in metaphysical disquisition. We entertain some doubts of its being even intelligible. So far as we can comprehend it, the position maintained by Mr. Combe is, that Conscientiousness does not determine what is just, but that "its real function is to produce an emotion of justice, or injustice, on the particular case or assemblage of facts being presented to it by the intellect." Now, here it is admitted that all the share the intellect has in the transaction, is to present Conscientiousness with facts. If upon these appearing, an emotion of justice or injustice is the consequence, what else is this than Conscientiousness deciding by itself that the action is right or wrong; or, in other words, giving it its moral denomination? If, on the contrary, the intellect not only presents to Conscientiousness the facts, but also tells it that the defendant has committed injustice, has done very wrong, and that Conscientiousness

* In the head of Gall, who denied that there was a Moral Sense, Conscientiousness is *much larger* than in that of Spurzheim, who discovered the organ and its function.

tiousness should entertain an emotion of disapproval, then the intellect either decides upon the moral quality from some reasons or from none. If from reasons, then there is no moral sense, because the result is a pure matter of logic; if without reasons, then from feeling, which would transfer the emotion of right to the Reflecting Faculties. Thus, for example, a number of witnesses swear that they saw one man put his hand into another man's pocket, and take out of it a silk handkerchief, which he transferred to his own. Here are all the facts. Now, whether is it Conscientiousness or Reflection that pronounces this act unjust? If Conscientiousness, then that organ *does* "lead to the perception of what is just;" if Reflection, then the sense of right and wrong is intellectual, not emotive, because if the intellect says that theft is very wrong, without any reason but that it feels so, then has it all the attributes of a sentiment, and does not require the aid of the one in question; while, if the intellect pronounces dishonesty a crime, by means of a train of reasoning, then all that can be meant by Virtue or Justice, is simply what is rational or wise, and ought not to be classed in any separate category.

What are rules or principles? This is a question of the utmost importance in the present investigation. Let us take the rules of grammar for example. The people of England have agreed to give particular sounds, called words, certain definite ideas. There is no reason why the sound *horse* should mean a particular quadruped, or *man* should signify a biped. But so it is, and all that we observe about it is the fact. Having made this observation, grammarians have remarked that there are a number of words which have some particulars in common with each other, as that some classes are used to signify objects, things, or substances; others their qualities; and others their states. Those particulars which certain words possess in common, they call rules of grammar or speech. After having stated these rules, they apply them to each word that occurs. They do not find it necessary to go back to inquire into the custom of speech, or the question of fact upon which these rules proceed, as each particular case or word occurs. They have collected these facts already; called the particulars wherein they agree, rules of grammar, or laws of speech; they substitute these laws for the facts from which they proceed, and they are fixed and settled in the mind as original principles, the rules of grammar becoming, as it were, a second nature. Thus, for example, should a man say, "I were went at church," we do not require to analyse the particular meaning of these words in order to feel that they do not agree with each other. Rules of speech and habits of language have been so instilled into us, that we feel at once that this expression is contrary to the laws which we have been accustomed to recognise, and we therefore unhesitatingly pronounce the sentence to be bad grammar. But we do not do this because the sentence is opposed to definite immutable laws of speech, which exist in nature independent of our opinions, but simply because it is contrary to facts which we have agreed to recognise as laws. Repeat this expression to a child, however, and he will see in it nothing that is objectionable. On the contrary, he will reply in as bad grammar as the sentence itself. The reason is plain—he has not had time to class the particulars common to certain words into general rules, and the laws of grammar have not yet become a habit with him. He cannot perceive that there are laws of speech, and does not feel himself bound by what he has not discovered. Or, take the case of arithmetic: By what method does an arithmetician solve any particular problem? It is not, in any single case, by going back to the first principles of notation. It is not by a tedious addition or subtraction of simple numerals, that he works any question. By that irksome process he has ascertained certain facts; these are fixed in his mind, either by his own inquiries or the tuition of others, as rules or principles; and upon these principles, he decides each particular case. Let us inquire if there be not some similar law in morals.

A person possessing large Benevolence, observes a philanthropist relieve distress. His Benevolence is gratified or approves of the act. He sees another visit prisons and subscribe to hospitals; again he is pleased and approves: and so forth through numerous similar acts. He observes another individual maltreat a horse; and his Benevolence is disagreeably affected, or he disapproves of the maltreatment. A second commits a murder; again his Benevolence is disagreeably affected. A third puts a fellow-creature to the torture; again he disapproves. All these acts possess particulars in common. The former produce happiness; the latter, misery. They are classed under rules—the first, including those acts which gratify Benevolence and are

approved of; the second, those which offend Benevolence and are condemned. This classification, adopted in the case of all the faculties, results in the formation of moral laws; and even when the propensities and sentiments are not directly excited by their relative objects, actions are tried by those rules which have been formed by the states of the organs consequent upon the presentation of particular cases. Thus, originally, the clothing of the naked pleased Benevolence; and it was because Benevolence was gratified that we approved of it. But after this action has been frequently repeated with the same result, we do not approve merely the specific act by Benevolence directly excited. Having approved before of clothing the naked because it pleased Benevolence, and this specific act of clothing the naked being similar in principle to those which we have approved before, we approve of it now, whether Benevolence be excited or not, because we have commended it formerly. Thus Benevolence, which formed the rule, may now be thrown out of the category, and we may applaud an act of kindness, because it is formed as a law of our mind that charity is commendable. So, for example, of other organs: Acquisitiveness is gratified by frugality, and disgusted by waste. A great number of acts of frugality are praised, and of prodigality blamed. We at last approve of saving, simply because we have before been accustomed to praise frugality and disapprove of waste, because similar acts of prodigality have been already blamed; thus, at last, throwing out of view Acquisitiveness, which dictated the rule, and trying subsequent acts by the rule itself. Indeed this is clear, from an analysis of the general principle. Abstract doctrines are derived from numerous individual examples; and it is certain, that when we possess a vivid sense of the truth and existence of the rule, we have not present to us the individual examples which formed the rule. Many acts of kindness make us approve of kindness as a general principle; but when we commend the law of doing good, we have not present to us the acts which made it a law, and our Benevolence is therefore not excited in maintaining the abstract proposition and applying it to new cases.

Dr. Thomas Brown, whose lectures are inexhaustible in the recognition of Phrenological principles, corroborates in effect the whole of this doctrine. Phrenology teaches us, that the ultimate explanation of the nature of all moral, as indeed of all other actions, is simply, that upon one line of conduct being presented to our consideration, the organ which takes cognisance of it is agreeably affected; and upon the opposite line being shown us, it is disagreeably affected. "That virtue," says the Doctor, "is nothing in itself, but is only a general name for certain actions which agree in exciting, when contemplated, a certain emotion of the mind. I trust I have already sufficiently shown. There is no virtue, no vice, but there are virtuous agents and vicious agents; that is to say, persons whose actions we cannot contemplate without a certain instant emotion; and what we term the law of nature in its relation to certain actions, is nothing more than the general agreement of this sentiment in relation to these actions. In thinking of virtue, therefore, it is evident that we are not to look for any thing self-existing, like the universal essences of the schools, and eternal like the Platonic ideas, but a felt relation, and nothing more. We are to consider only agents, and the emotions which these agents excite; and all which we mean by the moral differences of actions, is their tendency to excite one emotion rather than another." More particularly referring to this doctrine which we have ventured to propound, of judging of actions *at first* by their individual character, as calculated to excite certain emotions of an agreeable or disagreeable kind, but *afterwards* by their harmony with or resemblance to others which have been classified into principles, Dr. Brown observes: "One very extensive form of the influence of association on our moral sentiments, is that which consists in the application to particular cases of feelings that belong to a class. In nature there are no classes. There are only particular actions more or less beneficial or injurious. But we cannot consider these particular actions long without discovering in them, as in any other number of objects that may be considered by us at the same time, certain relations of analogy or resemblance of some sort, in consequence of which we class them together, and form for the whole class one comprehensive name: such are the generic words Justice, Injustice, Benevolence, Malevolence. To these generic words—which, if distinguished from the number of separate actions denoted by them, are mere words invented by ourselves—we gradually, from the influence of association in the feelings that have attended the particular cases to

which the same name has been applied, attach one mixed notion, a sort of compound or modified whole, of the various feelings which the actions separately would have excited; more vivid, therefore, than what would have arisen on the contemplation of some of these actions; less vivid than what others might have excited. It is enough that an action is one of a class which we term unjust; we feel instantly not the mere emotion which the action of itself would originally have excited, but we feel also that emotion which has been associated with the class of actions to which that particular action belongs; and though the action may be of a kind which, if we had formed no general arrangement, would have excited but slight emotion, as implying no very great injury produced or intended, it thus excites a far more vivid feeling, by borrowing, as it were, from other analogous or more atrocious actions that are comprehended under the same general term, the feeling which they would originally have excited." This doctrine is but the same principle which we before suggested, viz. that independently of the emotion produced by the specific action in its fundamental elements, there is a principle of abstraction, or classification of actions into one common centre of resemblance, whereby, when the original emotion which the action in itself is calculated to excite, lies dormant, the emotion of approval or disapproval generated by abstract ideas of virtue or vice, is excited by an action which resembles those which have been already classified into the general principle. This is a universal law of mind, applying as well to our perceptive as to our moral faculties. Thus, if we examine the process through which the mind goes in learning to read, we find that at first we have to learn the value of each syllable, and the effect of each letter arranged into a word; but after being accustomed for some time to spell out the words by this painful and laborious method, we afterwards cease to recur to the original process whereby we recognised the words, and read fluently by simply observing the resemblance in the form of the words we now currently hasten over, to those which formerly we spelled out with difficulty.

Mr. Combe and many of the elder metaphysicians, speak of "a Sense of Right and Wrong." But unless they analyse the meaning of these words, they make no advance in the philosophy of the question. Speaking Phrenologically, we cannot conceive of any action, or principle of morals or of science, which can be appreciable by us, except through the medium of one or other of the faculties of which these particulars are the related objects. Upon the presentation of these actions or doctrines, the faculties which are excited by them are agreeably or disagreeably affected. We cannot indeed comprehend what act is right or what wrong, except as it pleases or disgusts the faculty that is excited by its presence. Indeed, if the theory of Combe and Spurzheim be correct, we cannot see that there is the least use for any of the propensities or sentiments. If a man can be benevolent, pious, constant, affectionate, frugal, contented, and cheerful, with nothing but Conscientiousness, then what occasion is there for Benevolence, Wonder, Veneration, Firmness, Acquisitiveness, or Hope? Dr. Spurzheim demands, do we experience the same feeling when we lose a pair of gloves, or spend half-a-crown, as we would were we to rob a neighbour or utter a malevolent falsehood? To answer this, we have but to ask him, whether the emotion of Acquisitiveness is the same as that of Destructiveness, or whether the feeling of Cautiousness is of the same character with that of Combativeness? Let him put the question, Would a miser feel as great remorse and poignant anguish at losing his whole treasure by a rash speculation, as the benevolent man would by having ruined a fellow-creature? and, making allowance for the natural difference betwixt the emotion of Acquisitiveness and that of Benevolence, we fearlessly answer, that the miser would be as implacable as the philanthropist. Let Mr. Combe cast his eyes for a moment on the gamester, as, fleeced of his estate, his house, his last shilling, he rushes from the *rouge et noir* table, and, his eyeballs starting from his head, beating his breast, he curses himself, and plunges to kiss his burial in the Seine,—where, in the most fanatical enthusiast in the world, will he find greater self-reproach? Or, take Self-Esteem. A very proud man is betrayed into a very mean and shabby act, in which, however, there is not a vestige of dishonesty; yet, at the distance of half a century, the thought of it is anguish. A brave man once ran from the enemy: the thought of his disgrace harrows up his soul to his dying day. What reason is there for calling this regret, and the compunction for a theft remorse? Should a judge, with very small Benevolence and Veneration, possess large Firmness and Conscientiousness, he

would at once condemn to torture the breaker of the laws, and would not perceive that he had offended any principle. But add large Benevolence, and the act would reproach him through his life. Would we ever find piety in the moral code of a conscientious man who had small Veneration, Wonder, and Hope? or frugality in that of the man with small Acquisitiveness and Cautiousness, and large Benevolence? We hold it to be a glorious truth, that morality is the result of the perfect state of all the faculties, and that the complete condition of only one faculty will not make man worthy of his destiny. We would wish him to feel assured, that a single organ will not make him a dutiful son, a faithful husband, a kind father, or a devout child of God. And when he is thus assured, we would pray him to remember, that for each of these several relations, he possesses the suggesting principle of appropriate organs, by which alone the rules of right are formed by the intellect, and treasured up in the charter of his duties. That each man, as well as each nation, has a distinctive moral code, is as certain, as that the fact is conclusive of the fallacy of the proposition that all moral sense proceeds from a single organ. Nor is it more singular, that the whole inhabitants of a country should recognise the same common rules of right, than that they should speak the same common tongue, although there be nothing in the organ of Language which could prompt them to speak English in preference to French or German. Law, custom, reason, revelation, are all, of course, also so many motives for the recognition of the same common moral code.

From the progress we have now made in our inquiries, the reader must have observed that the mind is made up of antagonist principles, and that the gratification of one organ may offend its opposite. Should there then exist no harmonising principle, whereby the one may be called into exercise when the gratification of the other is about to offend it, man would become a prey to the alternate action of opposing forces; and Destructiveness, Benevolence, or Acquisitiveness would course each other through his conduct, producing alternately murder, profusion, and avarice. The operation of the one being predominant for the time, should create no disagreeable feeling in the other, which, when its turn came, would run its own course and be exhausted, neither regretting the past nor looking forward to the future. After Destructiveness had done its worst, Benevolence might look on in sympathy but not in self-reproach, relieving but not frowning upon its antagonist. There is thus required, in the arrangement of the human mind, an emotion or sentiment of harmony betwixt the faculties, producing pleasure or approval when they act in concert with each other, and repentance or remorse when one organ has acted in a manner discordant with the emotions of the rest. This sentiment arises, we believe, from the organ of Conscientiousness. The leading organs in any particular head form, of course, the predominant character of the individual, and are those which will excite Conscientiousness to its greatest extent. The office of this faculty is to lay its hand upon our arm when we are about to act or decide, and to demand that we shall not proceed upon the suggestions of one organ until the rest are satisfied. It at the same time tells us, that if we do proceed, pain and anguish will follow in the *ratio* of the power of the organ offended. Thus, should Acquisitiveness and Benevolence be both large, Conscientiousness will produce a constant harmony betwixt them, which will result in prudent, well-timed, but not lavish liberality. Were Conscientiousness small, the individual would be avaricious one day, and prodigal the next; or steal from A. B. and squander the money upon C. D. From this cause it is, that persons with deficient Conscientiousness never act consistently. Their conduct is a system of expedients, acting by the feeling that is uppermost at the time, and snatching at the gratification of the first organ that solicits. When education, reason, religion, all conspire to frame rules of action and duty, Conscientiousness demands that the conduct shall be in conformity with these laws, and compunction follows a discordance betwixt the actions and these principles.

The individual of small Conscientiousness, never regrets or repents, but acts after the manner of the brutes, following implicitly the current propensity, and pursuing another when that is gratified, without either thinking of laws or harmony of action. Thus are the great purposes of mind in him frustrated; and that beautiful system of checks, whereby the satisfaction of all the faculties is made a condition of the gratification of any one, is altogether lost to any practical purpose. The conscientious man, on the contrary, can only make peace with himself, by consulting the dictates of all the faculties before gratifying any. Every action of his life, is the act of his

whole nature; and is with the consent of all the estates that rule within him. Thus is he ever consistent, ever to be trusted, uniform, unchanging. No single organ will in him be permitted to take the sway—no faculty to reign, even for a moment, alone. Aware of his predominant characteristics, we know that by a harmonious action of these he will be always guided, and that the conduct of each day will be that of his whole life.

The operation of this, as of all other faculties, is most powerful in the line of those organs which are largest. Should Acquisitiveness and Benevolence be both considerable, property, although much valued, will be acquired in a manner not calculated to injure others. Should Self-Esteem be large, wealth will be obtained without mean or shabby expedients, and so forth. Combined with this organ, Acquisitiveness is likely to produce strictness in money matters. Where Acquisitiveness is small, and Conscientiousness large, debts are not likely to give much annoyance. If Time and Order be deficient, punctuality will not be desiderated.

We are sorry that our limits will not permit us to pursue the exposition of this subject in greater detail, but we trust that by these remarks, some advance has been made in the analysis of the function of the organ.

It is said that Conscientiousness is often found in a state of disease; but we are not satisfied that the phenomena generally recorded, can be legitimately traced to the action of this organ. There are great national differences in its development. Some savage tribes, particularly among the North American Indians, possess it large, with corresponding manifestations, but in most it is very small. It is an organ which we have much oftener found defective, in our practice, than any other. In Robert Bruce it is very small, while in Mrs. H., Mr. Martin, and others, it is large. To these busts we must refer the reader, as we think a diagram illustrative of this organ not likely to assist his idea of its situation and size.

SECTION V.—*Organ XVII. Hope.*

IMMEDIATELY in front of the lobes of Conscientiousness, and on each side of the organ of Veneration, is situated that of Hope. Its size is estimated by its height above those ridges which we have already described as running along the top of each side of the head. If the skull be gently rounded off from full Veneration, Hope will be also full; but if it slope rapidly on each side of that organ, it is small.

Mr. Robert Cox, as we have before observed, remarked, that the organ of Destructiveness was always excited by a disagreeable affection of the other faculties, while Benevolence was as invariably active upon the occurrence of their agreeable affection. It seems at least as certain, that there are other two states of the organs—the depressed and the elevated, which are as well marked, and as little questionable. A peculiar excitement of large Cautiousness, depresses the whole faculties and the entire system. Every thing is plunged in gloom, and the whole world wears the livery of despair. We lose all our usual mirth, forego all custom of exercise; and it goes so heavily with our disposition, that the earth is but a sterile promontory, and the brave o'erhanging firmament a pestilent congregation of vapours. The future is looked to with anxious solicitude, or rather with gloomy forebodings. It is gazed into with intense but despairing interest; and through its long vista, it seems like a dark tunnel, at the end of which no light is to be discovered. The action of the organ of Hope is exactly the reverse of this. It produces what is called a fine flow of animal spirits, a great love of activity and exercise, delight in the bustle of the world, and pleasure in elbowing through its thoroughfares. Every thing is seen in its brightest aspect, and it presents to us

“The gayest, happiest attitude of things.”

All the organs are at high pressure; the circulation of the blood through the brain is healthy, copious, and rapid; and each faculty is excited to its most agreeable and elevated state. The individual with large Hope is for ever whistling, singing, laughing, jumping, and playing the fool. Even although he should possess large passions and deficient sentiments, he may be a malicious, but he will certainly be a “merry devil.” The future will be all smiles, and the present all sunshine. Youth will have no sighs, and age neither care nor wrinkles.

It has been supposed, that this organ is that which in a peculiar sense gives the sentiment of the future. This is the function, however, of Time and Wonder. The tendency to anticipate is not confined to this faculty. Forebodings are even more common than hopes; and there are, at least, as many dungeons dug in the earth, as castles built in the air. If, indeed, there are Alnaschars in the world, there will be found to match them, at least, as many Croakers. As the function of Cautiousness, in its action on the other faculties, seems to be to dress them all in sables, so the organ of Hope appears to exert its influence to deck them in the bright livery of green and gold.

But the power of anticipating a future, either of joy or sorrow, is not delegated to either of these organs, whose function is, indeed, simply to give a *complexion* to what is to come. Should Wonder and Eventuality be very deficient, it will be impossible to conceive of coming events; and all that Cautiousness or Hope will do, will be to make the *present* either grievous or joyous—the future being a millstone, through which nothing can be seen. The character of the anticipation is the result also of other faculties. Wherever Acquisitiveness and Cautiousness are large, the miser will fear

“There is some ill abrewing toward my rest,
For I did dream of money-bags last night.”

Wherever Acquisitiveness joins itself to Hope, Queen Mab's coach will run

“O'er lawyers' fingers, who straight dream of fees.”

So, likewise, the Hope of Amativeness will place a dazzling beauty in its airy palace; and that of Love of Approbation, will elevate its owner to a throne surrounded by an admiring nation. If, then, the character be grovelling, the anticipations will be of low and sensual pleasures; and if it be unimaginative, the future will remain unthought of, but the present enjoyed. The world as it is, will be a very good sort of world, but no thought will be taken of a better or a higher.

The value of this organ is so obviously great, as hardly to require exposition. The fine flow of animal spirits which it produces, is highly promotive both of physical and mental health. It carries delight and happiness wherever we go. Heaven is then within us, and no external change can send us empty away. Unattended by countervailing Cautiousness, it makes us sanguine, rash, and fool-hardy; fearing nothing, hoping every thing, and prone to gambling or rash speculation, especially if assisted by powerful Acquisitiveness, and perhaps Combativeness.

When the organ is too small, every thing will be seen exactly as sober, dull, miserable reality makes it; and if with moderate Hope be combined large Cautiousness, all the faculties will be in a state of depression, and human life will appear much worse than it really is. As we have before observed, the circulating system is peculiarly dependent upon this organ; and hence in consumption, where the circulation becomes rather more rapid, and amounts even to a state of fever, the general weakness of the frame not being felt by the brain, the individual is cheerful, happy, and sanguine, even when tottering on the brink of the grave. Where, on the contrary, Cautiousness is large and Hope small, the circulation is slow and languid, the brain partaking of a dark and heavy inactivity.

Where both Hope and Cautiousness are large, it is probable that an agreeable action will be imparted to the latter, whereby a sweet sense of tranquillity will result, and success will be anticipated as the reward of prudence and forethought. But we find often that individuals have constantly alternating fits of despair and hope—of the most gloomy apprehensions, and the most extravagant expectations. The latter are traceable to large Hope; the former, it is evidently impossible to account for, without the action of large Cautiousness. If the theory we formerly propounded be correct, it may be anticipated, that where this alternate action exists, Conscientiousness is small; and where both organs act simultaneously, checking and guiding each other, Conscientiousness is large. The effect of this organ is to be carefully distinguished from that of Combativeness and Firmness. Hope perseveres from anticipation of success; Firmness perseveres in spite of opposition; while Combativeness perseveres from love of opposition.

We cannot doubt that Hope is manifested, and therefore the organ possessed, by the lower animals. Their fine animal spirits, their gratuitous vivacity, their gambols, their races, all testify the presence of Hope, the great comforter. In their dreams,

they give expression to their feelings of delight,—the horse neighing, and the dog whimpering and barking in imaginative joy. Amongst them, also, there are great diversities of character in this respect; some being dull, sombre, and sulky, while others are all fun and frolic. Vimont does not seem to have detected the convolutions of Hope in the brains of the lower creation, but we feel confident that they exist.

The organ we consider established.

SECTION VI.—Organ XVIII. Wonder.

THE organ of Wonder commences in front, immediately above the intellectual region, and runs back from the convolutions of Tune and Wit, to those of Hope. It is bounded laterally by the ridge that runs from Tune back to Cautiousness on the outside of the coronal surface, and by Imitation on the other side. The head rises high above Wit and Tune, and is very broad in the front of the coronal surface when Wonder is large.

Dr. Gall discovered most of the organs from observing their diseased action; and found in persons addicted to the marvellous, and subject to visions, a large development of that region of the head, to which he afterwards gave the name of Wonder. In the heads of Socrates, Tasso, Barry, Swedenborg, and others, who saw spectres, conversed with familiar spirits, and communed with angels, this region is of great size; and it is always to be found large in persons who are attended by spectres, and the phantoms of men and other creatures or substances. It is also very large in the head of an eminent statesman, now retired from public life, who is said to be frequently annoyed with the spectrum of a man who appears all covered with blood. In some painters it is so powerful, as to command the presence of the phantom of any figure they desire to paint, which remains before them as any living person would do while his portrait was being taken. To a certain extent, indeed, the whole art of painting and sculpture depends upon the activity of this organ; for, while a likeness is being transferred to the canvas or marble, the eye must for the moment be *off* the model, and the *simulacrum* carried by the *mind* to the plastic material out of which the resemblance is formed. We have seen many persons who drew striking likenesses from memory, and one who could produce a more accurate resemblance from recollection than by drawing from the figure itself. The case of Nicolai, who, from ill health and the possession of a very large organ of Wonder, was troubled with the apparition of an immense variety of figures, which conversed with himself and each other, is very interesting, because it is one of the few instances in which the patient was perfectly aware of the nature of the delusion. A fishmonger in London, in whose head there was a considerable endowment of the organ, was presented constantly with the ghosts of his oyster-shells. In all cases in which an extreme excess has been committed in the drinking of ardent spirits, exactly the same phenomena are presented, as would be the result in the event of a diseased action of Wonder, when there exists an involuntary activity of the organ. In *delirium tremens*, and also in most cases of furious mania, arising from an affection of the whole brain, the apparition of phantoms and *spectra* of various kinds, is likewise found to form part of the symptoms. These figures take peculiar forms, such as those of black flies, devils, and grinning demons, mostly dressed in sables. From these circumstances, and from the fact that when pain is felt at the region of Language, Tune, or Colour, the individual often feels haunted by the ghosts of words, tunes, or colours, we incline to the opinion, that the over-action of the perceptive organs produces these images or *spectra*, independently probably of this organ of Wonder; and that the effect of that faculty is to produce such an intensity of conception, as to act upon these others, and so stimulate them to the reproducing state. An implicit belief in the reality of certain existences or objects, always precedes the vision-seeing with which Wonder is allied. But where Wonder is even moderate, it is observed that involuntary apparitions arise from diseased action of the brain, even where the individual at once traces the phenomenon to mere delusion of the senses, and remains obstinately sceptical of the truth of the appearances. Still, it becomes extremely difficult to trace the exact office of the organ. We cannot suppose it to be capable, by itself, of producing *spectra*, because it is not one of the perceptive

faculties; and it does not seem, in any degree, to store or record their impressions; offices which are confined, we should presume, to the Intellectual powers. But, probably, by a fervour of conception, and extreme aptitude for belief, it easily imagines the existence of what is impalpable or absent, and stimulates the knowing faculties to realise in form, what in thought is yet but fantastical. Its resemblance in apparent function to the neighbouring organ of Imitation, is too palpable to escape notice. The action of the latter seems to enable the mind to reproduce the phantasms of passion, form, expression, and utterance, and thus to give the power of presenting the *spectrum* of past or absent objects. What indeed is the imitation of any thing that has been seen or heard, but the result of a vivid conception of the actual form, object, or sound? From this circumstance we have been inclined to suspect, that Wonder is at least as much concerned in success in all imitative arts as Imitation itself; the former probably stimulating to great fervour of conception or recollection the perceptive faculties, and the latter producing that intense sympathy of action which has been observed in the higher paroxysms of the organ of Imitation.

We have hitherto noticed the more excessive forms of the manifestation of Wonder; but it must evidently have some useful ordinary function. Man is a progressive being; and in this power of his nature, he is principally assisted by being enabled to avail himself of all the knowledge and thought of others. It is because each generation is enabled to put a round to the ladder of human progress, by availing itself of the steps furnished by the preceding—because, instead of each man being compelled by himself to commence at the rudiments of every science, and to collect all the facts which must be discovered preparatory to the formation of general principles, he is at once put in possession of every thing which has been ascertained before, and is the heir of all the theories and all the deductions which have been formed by his predecessors. But, in order to render these available to him, he must put them in the place of realities; he must be impressed with the conviction that they are as absolutely existences, as any thing that he sees with his eyes and handles with his hands; he must be impressed with their presence, not even simply as a fact, but in all the fervid conception of the existence of their real substance and proportions. It is upon this pivot that progression turns. If there be not an inherent and vital sense of the entity of things absent, every generation must at once throw behind it all the accumulated testimony of the past. The conviction of the reality of unseen and unfelt being, is a necessary condition of progression; man, in truth, only learning and forming principles by making the past present, the unseen apparent, the mysterious plain. This he cannot do but by the possession of a faculty of belief; and according as he possesses it, will be the power of realising. Hence we find, that mankind, so far from having a tendency to scepticism, have to undergo a process of unlearning, and to be rather taught by experience to disbelieve than to credit. The state of infancy, in which this organ is most prominently developed, is an age of credulity. Life, existence, is infused into every thing: the doll is a person, the watch has life, the cat has conversation. Every fictitious appearance is supposed to be real; and life is a splendid pageant, in which the true and the false are mingled together in one common impression of actual being. Did the child inquire into the truth of all it was taught, it would spend its life in rudimental discovery; while, we know that much of its after time is lost in unlearning the ideas of vital power in which Wonder had clothed all—in sobering down its impressions to the dry bareness of the facts, and in discovering that much which it endowed with reality was dead, inert, and spiritless.

We are inclined to the opinion, that in the inductions of the most severe philosophy, this principle holds its own and a most important place. Dr. Brown, in his able Treatise on Causation, has demonstrated, that causes stand in no other relation to effects than as antecedents. He has also shown, that at first they receive no other title; and that it is only after cause has preceded effect, and effect has followed cause invariably, that we conclude from the constancy of past sequence that the same uniformity will occur in future, and are induced to change the name of antecedent into cause. But mankind do not so reason. They feel at once and at first, that there is some efficient and vital power in the antecedent to produce the consequent; that they do not stand in the relation of sequence merely, but that the one animates and creates the other. We incline to the belief, that to the organ of Wonder is to be attributed this tendency, and that the province

of reason is rather to correct the impressions of this sentiment, than to create causes or trace effects. The original idea of all causation seems to be that of some inherent vital power dwelling in all existences, calculated to produce certain defined or mysterious results. Were objects to be presented to the intellect simply in the relation of sequence—as, before inquiry, they ought all to appear—we do not see how the impression of the relation of cause and effect could be, as in children, savages, and ordinary men, it is produced on the very first presentation of the objects—the discovery which ascertains that, in fact, there is no relation whatever requiring generally more labour and discrimination, than to detect in sequence some principle of causation.

All the feelings, if in excess, exhaust the objects of sense and reality, and by involuntary action create beings of their own. Wonder, above all, when large, is not to be satisfied with what merely is. When the mind is filled with anxious thoughts, intense feelings, and overmastering passions, the sense of reality comes to their aid, creates what they imagine, causes to be what they merely felt the dim shadow of, and calls into life and being what they feared or hoped, or hated or loved. Wonder is ancillary to the rest—the Alladin's lamp that evokes the genii of all the powers of the earth—the magic ring—the wishing cap—the seven-league boots, or the flying horse. It is situated immediately in the neighbourhood of Constructiveness, whose fertile genius reconciles all its contradictions, imagines readily the various latent particulars necessary to make its parts hang together, and, universal peace-maker of theories, gives a consistency to the greatest incongruities. Acting together, they compose and produce marvellous yet feasible stories; and, beginning by imposing on others, end—such is naturally the result of that very credulity which invents so easily—by imposing upon themselves.

To a true poet, Wonder is at least as necessary as Ideality. The latter is the organ by which perfection is perceived or selected; the former is that whereby the objects of selection are conceived, recalled, and presented for its choice. It is Wonder which makes the machinery of poetry,—impersonating the linnet, the lute, the rose, the nightingale, the rude sea, and the rattling thunder. It is developed very largely in the head of Chalmers, who is distinguished for the strength and copiousness of his imagery, and the vivid reality of person, object, or thing, which glows in his compositions.

Peron and other travellers in New Holland, mention, that the natives of that country are the only people hitherto discovered who have no conception of a God, or the existence of any supernal being. They do not labour under any deficiency of Veneration; which, indeed, considered relatively to the other organs, is large. But they are lamentably deficient in Wonder, which gives the sense of presence or vitality to what is absent or lifeless; and in Constructiveness, which produces the desire of accounting consistently for, and reconciling in theory, all phenomena. And thus are they Atheists, not from a sceptical disbelief of evidence, but from never having formed a conception of any thing that was not present to the senses. Veneration superinduces the sense of our own unworthiness; Wonder that of the personality of a First Cause or Intelligent Power in the elements—the attributes of the Being, of course, taking their shape from the leading tendencies of our own minds; a low intellect conceiving only a grovelling deity, while an elevated soul gives a lofty character to its conception. Without this organ of Wonder, faith in a God, or invisible power, is impossible; by faith, meaning not a conviction merely of the abstract proposition, that there is a First Cause, but the real sentiment that there is a Being with certain attributes, whose spirit we conceive, whose character we truly love, and whom we feel not to be far from every one of us. We say, that the man with deficient Wonder cannot be any thing else than practically a sceptic, because he naturally is so weak in the power of conception necessary to see "God in clouds, or hear him in the wind," that with him faith is a moral impossibility. Of course, we do not mean that such belief cannot, by a miraculous interposition of the Deity, be superinduced; but as God, even in the miracles recorded in the New Testament, always works by means, and as in the case of an individual with small Wonder the means are wanting, it appears to us unlikely that such a one should be selected as the subject of the miracle of regeneration. If, then, a large developement of Wonder is always found in believers, it will not be easy to prove that their faith is not the result of that organ, instead of being produced by a miracle. At all events, it is

quite certain, that in this country, and in modern times, faith is present or absent invariably in the proportions in which this organ is developed.

The ordinary operation of this organ, in the every day occurrences of society, appears in the production of easy belief, or gullible credulity. When weak, the individual is sceptical of every thing. He will credit nothing that he has not seen himself, or that is not within the probable range of the most commonplace occurrences. Such a man is actually as much hallucinated as he who is over-credulous, and is just as likely to be less or more mistaken than the other, according as truth or error is more common in the world. The one believes upon slight evidence; while the other is incredulous even when the evidence is conclusive. Hence, we doubt whether there ever was or could be a great and comprehensive mind where Wonder was deficient. Nature is the most wonderful of all things; sober fact the most marvellous; "Truth is strange, stranger than Fiction;" human nature is astonishing; the history of mankind is full of bizarrerie and monstrosity. Who, without immense Wonder, could ever have imagined, that the fixed and firm-set earth on which he stood, rolled round the sun with a velocity that put to shame all other speed? Who that was sceptical, could ever have asked himself, why does an apple not fall upwards, or remain in air suspended? It requires a vast and luxuriant fancy to believe in and conceive of the real essence of things; and every sceptic is in fact credulous, when he disbelieves so much in the face of evidence which warrants unbounded credulity. All great men have possessed large Wonder,—the power of realising the absent, and of rendering the spiritual corporeal: Napoleon, Cæsar, Shakspeare, all had large Wonder. In the discoverers of continents, and new principles in nature, it is equally striking: Columbus, Galileo, Hahnemann, Gall, Socrates, Van Helmont, were distinguished for the size and manifestation of this important organ.

Wonder transports us to whatever locality we conceive of, or to the presence of whatever beings are described to us. It is necessary to give, in the reader or hearer, effect to the pictures of the poet or orator; and to make us feel that we are in Venice or Athens or Rome, or confronted with Richard or Brutus or Hamlet, or are living in past ages and in different times. It is upon this principle, that a liar of the mere long-bow kind, who has a wonderful story about every thing, at last brings himself to believe what he palms upon others; and it is from a desire to incite in them the seuse of reality felt by himself, that he loves to embellish, while he would scorn any other species of dishonesty. To be an accomplished liar, there must be in the person's own mind a strong although fictitious credence, in order to obtain belief. The impersonation of brutes or inanimate objects, as in fables—or in Washington Irving's dance of the room furniture, where an old great-coat sidles up to an arm-chair, and the tongs perform a pirouette to the admiration of the clothes-press—is the result of the activity of Wonder.

The discovery and analysis of this organ, is calculated to be of much benefit to society, by disabusing it of the very prevalent idea, that a credulous visionary is necessarily of unsound mind, or must be a fool. It may also teach the world a lesson of charity, towards those whose religious feelings are principally excited through this organ. Baron Swedenborg, from his religious writings, is generally termed a crazy enthusiast. Yet it is only necessary to examine his works upon philosophy, and to trace through his life the important public offices he filled with so much ability and sound discretion, in order to see how false and absurd so foul an epithet would be when applied to this excellent man. We are intimately acquainted with one of his followers, a gentleman belonging to one of the most respectable departments of the legal profession in Scotland. We have had frequent occasion to transact lengthened, intricate, and complicated business with him, and do not hesitate to pronounce him as distinguished for knowledge of his profession, as for dexterity of argument, and clearness of perception and sagacity. From his head, (of which a sketch is given below,) a Phrenologist would be quite prepared for this; as also to expect some extraordinary manifestations of Wonder, which is very large, accompanied with excellent Constructiveness. Accordingly, he has often assured us, that he had a direct revelation from heaven of all the events which have happened in Europe since the French revolution. He also gave us day and date for a rebellion which had happened in Tartarus, and minutely described the negotiations that took place betwixt the ringleaders and various ambassadors who were sent from heaven to keep the unruly members in order. Visions of the Deity

in his "human form," as he expressed it, were not hidden from him; and he declares, that the true church, as well as the most civilised of the nations, will certainly be found in the centre of Africa, where, it is said, the greatest number of horses are to be found—these quadrupeds, according to one of the three modes of interpreting Scripture which he has adopted, being emblematical of wisdom. In producing these theories of interpretation, Constructiveness must be in active requisition. Wonder, as well as Imitation, is very large in the head of Victor Hugo, and indeed in that of all great novelists.



SECTION VII.—*Organ XIX. Ideality.*

THE situation of the organ of Ideality, has, we think, been in general incorrectly indicated by Phrenologists, and erroneously marked on most, if not all, of the model busts. It is generally placed in a situation immediately below and at the outside of Wonder, and exactly above and adjoining to Constructiveness. Now, in our opinion, there are no organs intervening betwixt these, which appear to monopolise all the anterior portion of the coronal surface, and superior part of the front of the side of the head. Gall describes the position of Ideality as "above the temples, in a direction backward and upward." In his model bust, and in that of Vimont, the centre, or perhaps almost the front edge of the organ, is intersected by the suture which joins the frontal and parietal bones, immediately above Acquisitiveness and behind Wonder, just in front of, or perhaps almost a continuation downward of, the organ of Hope, resting upon the ridge running from Cautiousness to Tune. It is pretty accurately indicated in the model bust, by that portion of the cranium which is marked with a point of interrogation, thus (?); and to which Mr. Combe has been inclined to assign the sense of the Sublime. In the head of Francois Cordonnier, whose bust Gall was in use to exhibit as possessing a very large development of this organ, the projection of the head *in front* is altogether in the line of Acquisitiveness, but towards the posterior part it protrudes laterally to a great extent at the region we have just assigned to Ideality. Vimont's new organ, called the sense of the Beautiful in the Arts, is described as occupying pretty nearly the place at present supposed to belong to the organ we are considering.

Gall denominated this the Poetical faculty; and Spurzheim changed it to its present name, Ideality. Vimont protests against the alteration, and with a spice of Dr. Elliotson's bitterness, accuses Spurzheim of giving it a new title for the mere purpose of subtracting from the merit of Gall, and adding to his own. He most properly observes, that he has changed the name from a correct and intelligible one, to a title which is equally obscure and absurd. He says, that the ideal is the mere fanciful, whether beautiful, sublime, or mean and vulgar, which belongs to Wonder; and it is the *beau-ideal* which constitutes, what both of the writers mean by this faculty, and which is well defined by Gall as the sentiment of poetry.

In contemplating the condition of the lower animals, we cannot fail to be struck with the fact, that it has been, and is, perfectly stationary. The population of the

earth, the air, and the waters, all have paused and stood still. As they sprung at first from the hand of Omnipotence, so they stand now, perfect as their nature could admit of, permanent, unprogressive. A few months after they are born, they are as complete, and as absolutely without spot or blemish, as they are ever capable of being. Should they live for fifty years, they learn nothing, and make no higher acquirements. Not only is this the case, but they derive absolutely nothing from each other, and communicate only what may be sufficient in their infant state to enable them to fly, or to discern their food. They live in societies, but add nothing to mutual comfort; being as unprogressive, either as individuals or as a species, as if each lived for ever apart from all the rest. It is apparent from their faculties and nature, that in a short time they have fulfilled the purposes of their creation, and being intended for nothing more than what they are, and do, and feel. Without free-will, which they may abuse, or an amount of intellect sufficient to control, but with only enough to assist their instincts, and with no attribute of change or faculty of improvement, it is apparent that their end, nature, and destiny, are entirely served in their present state, and that, neither giving knowledge or benefit to others, nor receiving any in return, they bring as little as they leave, and both what they get and what they give amounts to—nothing.

Of man, on the other hand, the very reverse of all this is true. He is born a poor, feeble, muling creature, as helpless as the meanest thing of life; and if he be left solitary to self-education, he is little above an idiot, or starts a savage, without house, or home, or shed, or shelter. But does he, like the lower creation, remain what he was, the same in desire, emotion, and instinct, hunting, going naked, or climbing the forest trees? Has he exactly the same house in form, size, and shape, that he had at first? Has he, in all ages, precisely the same language, cries, gestures, habits, and tastes? The answer is, emphatically, No! From the moment each individual is born until he dies, he is acquiring something new, and learning what he did not know before; and whenever society is formed, he ceases to stand still. From the rudest hut to the stateliest palace, from the frail canoe of bark to the line-of-battle ship, he proceeds. From the annals of his petty tribe, he learns the history of the world; and from ignorance of the principles of the most common phenomena of nature, he progresses to a knowledge of all the laws of creation; and, looking through and beyond space to myriads of worlds, he dives with Newton almost into the counsels of Omnipotence. He proceeds on and on, for ever—he is insatiable. When he is most wise, he looks upon what he knows as nothing to what he may acquire. The world is too mean for his aspirations and desires, his thoughts are boundless, and his eyes are turned to eternity. Whence is all this? Why is man alone marked out, in the theatre of creation, as a being that is never to stop? and while all else pauses and proceeds not, why is it that he alone never tarries, and never ceases to progress? The answer is plain: the faculties of man are capable of indefinite expansion and advancement, while those of the other animals are only fitted for a definite and unchangeable condition. Yet is it quite possible, that man might have all faculties adapted for progress, and, notwithstanding, remain stationary. If he did not entertain the *desire* to be better than he is, his other powers would not be directed to that end. They afford the *means* of improvement, but do not produce the *desire*. Veneration might for ever worship, without endowing the divinity with a more elevated character. Benevolence might continue to do good, but never extend its sphere or means of happiness; and Hope might continue to smile upon the most grovelling state, without ever imagining that it might be improved. All the feelings might demand a change of object, limiting their desires to the kind not the degree of mutation. To *advance*, we must desire to do so; and this desire is furnished by Ideality.

This organ gives us the disposition of making and thinking every thing better than it is. Whatever is seen is enhanced and magnified. We cannot rest in realities, or dwell upon any thing merely as it stands. Whatever object we behold, we wish it to be better; and if we possess large Wonder and Hope, we conceive it better. Luxuries become necessities,—every thing progresses, all is magnified, enhanced, beautified, adorned, enchanted. A pestilent congregation of vapours becomes a brave o'erhanging firmament, a majestical roof fretted with golden fire. It is this that makes the temple solemn, the palace gorgeous, and cloud-caps the towers. It exalts the delight of every organ, enhances the emotions to the raptures of an ecstasy, sublimates the objects of the faculties, and beautifies the relations

of all our perceptions. Wherever is found the march of human improvement, there may be seen largely developed the organ of Ideality. Wherever there is an absolute pause in the progress of the race, there will this faculty be found eminently deficient. The Athenians, who of all nations made the most constant, as well as rapid progress in art, science, and literature, were most largely endowed with it; and it is among the moderns to be found largest in the British and the French, while among those savage tribes which seem hardly, if at all, to have advanced, it is most remarkably deficient. Contrast the Caffres or Charibs with even the Peruvians or Mexicans of the time of Columbus, and it will be seen that the difference in social progress is not greater than in the development of Ideality. In the skulls found in the extensive burying-grounds which may be seen in a portion of Peru, there is nearly a total obliteration of this organ, as indeed of almost all those faculties which peculiarly distinguish man from the brutes; to the crania of some of the latter of whom, they bear not a very distant resemblance. Accordingly, the races to which they belonged, became, from extreme barbarism and incapacity for social progress, absolutely extinct.

This organ seems to be the sense of onwardness, the desire of advance, the faculty of going forward. Whatever it does, must better what is done. It is restless, perturbed, fastidious, delicate. It feels that "naught is done while aught remains to do." Nothing is so good that it wishes not to be better—nothing so great that it may not be greater. It makes man aspire to emulate the character of his Maker, and dictates the sentiment, "be ye perfect, as your Father in heaven is perfect." It reminds us that we are formed after the image of God, and prompts us to maintain and improve the resemblance. Combined with Wonder, it imagines to exist all that it desires to be real—it finds

"Tongues in trees, words in the running brooks,
Sermons in stones, and good in every thing."

Ideality, then, is the desire of progression, of advance, of increase, of amplification, of having every thing further forward than it is, and all objects enhanced by additional attributes. The love of perfection is in truth simply the desire of progress, for all perfection is relative, and in the finite state of man is a mere *degree* of excellence. One Being alone is perfect; every other *entity* is incapable of perfection, for there is no state of any existence of which we can say that it cannot be enlarged and improved. Man himself is entering upon a career of progress—he never can, and never will stop—he is to live through the countless ages of eternity, and for ever and for ever is his occupation to be to advance, and acquire, and improve.

The species of advance or perfection which a man will admire and strive to emulate, of course, depends altogether upon the relative development of his organs, for Ideality is more seen in its effect upon the other faculties than in the manifestation of its isolated action. Combined with a small head, and large Love of Approbation, it may aspire to the perfection of dress; with Amativeness it will, as in the Athenians, lavish its admiration on mere physical beauty. Modified by the moral sentiments, it may expand with the majesty of virtue; and allied to Combaticiveness and Destructiveness, it may pant for

"The plumed troop,
And all the majesty, pride, pomp, and circumstance
Of glorious war."

Wordsworth, who, with large Ideality, combines vast Wonder, Hope, and moral sentiment, presents the noblest manifestation of its excellence. He admires every thing, and sees beauty and magnificence in universal nature. A daisy transports him, a lily is more precious than gold, and a cowslip is worth a diadem. Imbued with the highest moral instincts, his reflecting faculties are also very powerful, and accordingly, both by his critics and admirers, he is styled the metaphysical poet.

In the architect, mechanician, manufacturer, soldier, sailor, or merchant, Ideality produces the desire of improvement in their professions, and dissatisfaction with mediocrity. It has produced a great change in Britain. In the house of the common labourer, a tea-cup may be found, shaped after the Athenian model; a jug like the Etruscan vase; the very bed-curtain covered with figures of beautiful flowers, and the house-gown with nosegays of carnations. Ink-stands are not merely for use, but

tell a story; and to give us needful light, the candles are held by graceful goddesses. There is a restless spirit of discontent with every thing that is; and the whole world seems to be inspired with the wish, not of novelty merely, but of an eternal improvement in all the necessities and luxuries of life.

Persons endowed with small Ideality grumble at every advance, and object to all changes or innovations. In ornament they see no utility, and do not like any thing to be better than well enough. They hate machinery and steam-engines, abominate new canals, and detest railways. They can see no advantage in the acceleration of travelling, except to break people's necks, and complacently, or perhaps rather pettishly, ask, what good machinery has done but to throw people idle, or what is the use of hearing the news from London sooner, if one does not get them faster than another? They cannot understand what people make such a work about; and consider poetry, painting, sculpture, or architecture, as a pure waste of time and money, to say nothing of being an encouragement for idleness. Their question is, what purpose will it serve? Will it fill your stomach or your purse? And so they clout their discourse with musty proverbs, and wrap themselves up in conceit of the sagacity of their dull, dry, hoddengrey opinions.

Gall and Vimont notice a number of cases where this organ is stated to have been only manifested when mania had supervened; but we are not at all satisfied that the making of verses, upon which they principally found, is indicative of a high endowment of Ideality.

In order more perfectly to define the site of this organ, we have given, at the end of the volume, a sketch of the mask of Dr. Chalmers, in which it is very highly developed, along with powerful Wonder, considerable Imitation, and large Constructiveness.

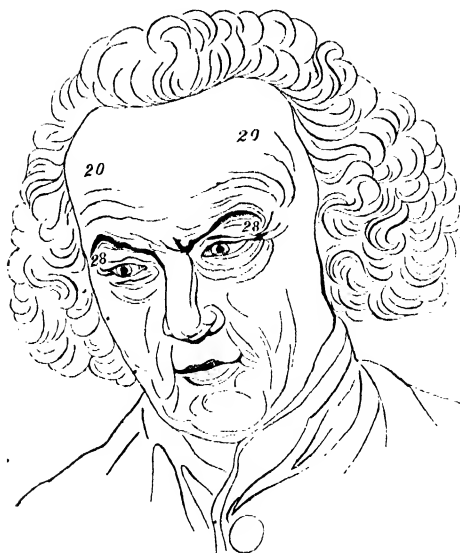
SECTION VIII.—*Organ XX. Wit, or Mirthfulness.*

NOTHING can better demonstrate the extreme carelessness with which Spurzheim observed and analysed, than his dissertation on the phenomena of Wit. He states, as an anatomical fact, that Ideality and Wit belong to the same department of convolutions, and that, as Ideality is a sentiment, Wit must be a sentiment also. In order that his dissecting powers may be supported by his metaphysical analysis, he also maintains that Wit is not an intellectual perception, but is "a sentiment which disposes men to view every thing in a gay, joyful, and mirthful manner." He supposes it as "given to man to render him merry and gay, feelings not to be confounded with satisfaction and contentment; these are affections of every faculty, whilst gaiety and mirthfulness belong to that which now occupies our attention." Mr. Combe also observes of individuals in whom Wit was largely developed—"Their great delight was to heap absurd and incongruous ideas together, to extract laughter out of every object, and to enjoy the mirth which their sallies had created. In consequence of these observations, I embrace Dr. Spurzheim's view, that the sentiment of the ludicrous is the primitive function of the organ." When it turned out that Curran and Sheridan had but an indifferent development of this organ, Mr. Combe states that he does not regard their cases as "attended with much difficulty." His reason for this is, that although Curran had a reputation for wit, yet, that he "manifested chiefly burlesque humour;" and that, although "the wit of Sheridan's works is more abundant, and of a higher character than the organ of the faculty in his head would lead us to expect," yet, that "much of the wit which sparkles in Sheridan's pages was not his own, but collected in the intellectual circles in London, in which he moved, noted down by him when uttered by his friends, and subsequently wrought up into his own productions."

In these propositions we have a series of the most extraordinary contradictions and hardy and gratuitous assertions that have ever been presented to the Phrenological public. The organ of Wit is situated on the forehead, betwixt the organs of Tune and Causality, and is to all intents and purposes in the Intellectual, and not in the Sentimental region of the head. Its connexion with Ideality we must dispute, although it seems to run into Wonder, but not in any degree more so than Causality and Comparison are lost in the region of Moral Sentiments. Mr Combe concurs with Spurzheim's definition of the function of the organ, that it "disposes men to view

every thing in a gay, joyful, and mirthful manner," but sees no difficulty in the fact that Curran had a poor developement of it, because he manifested "*chiefly burlesque humour*"! As if this were not enough, the series of contradictions is crowned with the statement that "there may be much excellent wit" (the result of this faculty) "without exciting us to laugh." Why, what does Mr. Combe conceive to be a disposition to view every thing in a "gay, joyful, and mirthful manner," if, to take his own monstrous distortion of Curran's wit to be any thing more than the bigotry of a theorist, it be not manifested in the production "*of burlesque humour*"? Or, suppose Sheridan never to have uttered a single original thought, what can Mr. Combe make of his assiduous collection, and his constant and industrious retailment of all those things that were wont to set the table on a roar, but a "disposition apparently irresistible to view objects in a ludicrous light." Be it recollected that he and Spurzheim cordially concur in the position, that this organ is not an intellectual faculty, but a mere sentiment of gaiety or mirth; and that, at the same time, they complacently maintain, that the disposition to view every thing in a ludicrous light does not exist in the burlesque humorist, or in the collector of all that is funny, joyous, and facetious. Upon this principle, Grimaldi or Liston ought to have a very large, and a very small developement of the organ—because, along with the small-witted Curran, their fun consisted in burlesque humour, which is said to be no indication of the manifestation of the organ, while, at the same time, mirth, laughter, gaiety, and joy, were inseparable from almost every action of their lives. We believe it was left for Mr. Combe to support the monstrous paradox, that the author of "The Rivals," "The School for Scandal," "The Trip to Scarborough," and "The Duenna," was a man either deficient in mirthfulness as a sentiment, or wit as an intellectual power. He must, indeed, have an extraordinary idea of the highest and most refined society in Britain, if he supposes that Sheridan gained in it the reputation of the greatest wit of his age, when he actually had little or none. That some of his jokes were borrowed, will not astonish any one who knows, that all the greatest poets, painters, metaphysicians, composers, and naturalists have borrowed, and that with no sparing hand. But no man was ever hardy enough to maintain, that any human being rose to eminence for wit, fancy, or thought, who possessed little or none of these qualities, and was indebted to others for all that he produced. Above all, no man ever retailed the wit of others without perceiving it; and no man who perceives it, can be deficient in the sentiment upon which it depends. To be enabled to set the table on a roar, by passing off other men's jokes, we must at least possess the *sentiment* of mirth and gaiety, however defective we may be in the intellectual power whose action is calculated to gratify that sentiment. It is not too much to say, that had Curran and Sheridan possessed a large developement of Wit, although they had never manifested any other indications of it than have been handed down to us, those Phrenologists who, in the face of universal society, of the strongest testimony, and of the most conclusive circumstantial evidence, have so presumed upon the patience or credulity of the public, as to deny their title to that gift which is least easily assumed, and most easily detected, would have been the first to enlist their cases in their catalogue of illustrations. It is by venturing upon such monstrous assertions as we have here noticed, that Phrenologists bring the science they advocate into contempt.

We claim the examples of Curran and Sheridan as conclusive evidence that the organ No. 20, which is defective in their developement, is neither the sentiment of mirth, nor the intellectual power of wit. If Spurzheim and Mr. Combe have been in any degree whatever careful in their investigations of cerebral phenomena, they cannot fail to have found, not one, but a hundred cases, in which Wit was only moderately developed, while the individuals were distinguished for the very highest qualities of mirth, continual gaiety, the happiest vein of humour, and the most felicitous turns of wit. If, further, they have attended with common solicitude to mental manifestations, they must have found hundreds of cases in which the organ of Wit was enormously developed, with the most entire destitution of ludicrous perceptions, or the spirit of mirth. To compare Franklin with Sheridan as a wit, would be utterly absurd; yet he had large No. 20, while in the latter it was only moderate. In the head of Dr. Price, here sketched from Spurzheim's collection, the organ of Wit is absolutely *enormous*, while he was one of the most lugubrious men either in spirit or intellectual perception that ever threw a shade over a



company. Next to him we may specify J. J. Rousseau, in whose forehead the organ projects like a pair of horns, and who was perhaps the most funereal personage in the world. What, too, becomes of the sentiment of gaiety or mirthfulness in Moliere, who was known to be constitutionally melancholy, sad, and miserable; or in Swift, the very example Spurzheim himself quotes, who never was known to laugh, or even smile, in the whole course of his life? These instances prove beyond contradiction, that with the most tristful and mournful melancholy of sentiment, may co-exist the most witty and ludicrous perceptions; that the gayest and most mirthful personages may have no great power of originating wit; that the organ of Wit may be enormous, with no power of wit at all; and that the organ may be very small indeed, while the perception and sentiment of the ludicrous is manifested in the highest degree. In short, they satisfactorily demonstrate, that the organ now under consideration has nothing peculiarly appertaining to the power of Wit, and that it only modifies that power in the same sense in which the other faculties do, which all have their effect in giving their peculiar turn to the humour or satire of the speaker. What perhaps is even more conclusive of the total opposition of Spurzheim's views to fact is, that it is not even pretended that any of the lower animals possess this organ; and it is hardly to be credited that the lynx eye of Vimont would not have detected it, had it existed. Now, the lower animals greatly excel man in gaiety, fun, and frolic—in feints, stratagems, and practical jokes. No one can look into a dog's face, too, without seeing that he can laugh—or long contemplate the earth, without detecting in all animated nature, elastic joy, and constant and joyous mirth.

Vimont states, unequivocally, that Spurzheim has doubly erred, in placing this organ (No. 20) among the sentiments, and in supposing it to be the cause of gaiety. He considers wit and satire to be the result of the happy combination of several faculties. Broussais calls it a sentiment, because "the conversation, as well as gestures of wits, are directed to an instinctive want of nature, that of laughter. Yes, it is a natural want; very powerful in the infant, who laughs at what would not excite a smile in the adult. It is a want, because the infant laughs so frequently, and would not do so for nothing." "The truth is, that the infant laughs at so little, that an adult cannot conceive the joy of that period of life; and even among adults, those who are children in this respect, and who have all this organ very large, cannot tell what it is they laugh at." Broussais then observes, that some individuals in whom the organ is large, never laugh; but that this arises altogether from the organ of Cautiousness being larger than that of Wit, and subduing its external mani-

festation. We think Broussais has here said quite enough to refute his own theory. He says that children laugh universally, and continually, while it is certain that they are not all largely endowed with the organ of Wit. He admits that the laughter diminishes as the age increases; another conclusive proof that laughter does not depend upon a peculiar organ, but upon general physical constitution. He likewise suggests, that laughter is a *natural want*; and who ever heard of such a desideratum being dependant for its supply upon the size (fortuitous as it must be) of a single cerebral convolution? Laughter is incidental to an agreeable state of all the faculties, or stimulus of the nervous system, and is just one method adopted by nature to neutralise the dangerous effect which might be produced by great cerebral excitement, without some safety-valve by which the extra stimulus might be evacuated. A high excitement of the brain in the way of grief, requires the convulsive sobs, and the rapid evacuation of tears. If these do not flow, madness often follows. A powerful agreeable agitation of the brain, if not relieved by the convulsive and exhausting agitation of laughter, shouting, or other violent exclamation, is very apt to result in exactly the same fatal catastrophe. But that the sentiment, as Broussais seems to suppose, which produces laughter, is not the organ of Wit, is extremely evident from the fact, that thousands of individuals, in whom it is very small, are distinguished equally by their humour, their wit, and their buoyant and never-ending mirth.

M. Schwartz, of Stockholm, advances the following theory upon the subject. "Every body knows," says he, "that what is called presence of mind, is a quality which very few possess: we admire it in the sallies of the wit; the originality of the philosopher; the dexterous use of the means at his command in the soldier; in the cool calculation of the gambler's chances; in the judicious choice of the merchant in his speculations; in the fertility of the mechanician's inventions; and so of all the various conditions of society. It is, in my opinion, that faculty which, accompanied with a large endowment of the perceptive faculties, such as Tune, Number, and Form, constitutes what is properly termed genius, which strikes us with the originality and importance of its results." "The tendency to perceive the ridiculous, or to raise a laugh in pointing out the inaptitude or absurdity of any thing relatively to the end sought to be obtained, evidently proceeds from this organ. Persons in whom it is large, manifest at an early age, in their speech, actions, and writings, what is called good sound sense; they seldom expose themselves to embarrassment or ridicule, because they detect at a glance the slightest error in the conduct of others." "Combined with high moral qualities, it produces wisdom; and where the place of these is occupied by powerful Secretiveness, the individual becomes a dexterous swindler. Where the organ is deficient, the individual is constantly in scrapes from want of presence of mind, and has that air of stupidity which is said to have characterised Lafontaine."—This *theory* of Schwartz has every thing to recommend it but one particular. It is contrary to fact. Curran was not deficient in presence of mind; neither surely was Sheridan. In them, Wit was indifferently developed. Price was rather distinguished for absence of mind; in him, it was large. The Duke of Wellington and Napoleon Bonaparte, had more presence of mind, and a smaller developement of this organ, than Franklin, Sterne, Swift, or Voltaire. We believe this bold attempt at generalization, has its origin in the perception of the fact, that witty men are peculiarly prompt in seizing upon any opportunity for introducing a repartee, and are ready in their answers; but this is rather a condition of wit, than wit itself, it being absolutely necessary to the earning of a character for smartness, that the good saying should be produced at the only moment when it can apply or be successful. This arises altogether from temperament, and a felicitous combined action of a certain group of faculties; for it is certain, that many a man is extremely witty *behind-hand*; or, in other words, there are a number of persons who abound in ludicrous images and smart conceits, but who are destitute of that readiness of thought, which is necessary to the utterance of the happy idea at the proper moment it is wished.

While we object to the function attributed by Mr. Schwartz to the *organ* of Wit, we, at the same time, entirely concur with him in his general conception of the causes which produce wit itself. His own general principle ought, however, to have led to a totally opposite conclusion to that which he has drawn from it. What is presence of mind? It is, Phrenologically considered, the action of all the organs

of the brain, at any given time, which are necessary to produce the most apt result of which the circumstances will admit. It does not therefore consist of the action of a single organ, but of a felicitous simultaneity of combined organic action, terminating in the very best possible effect which the occasion could furnish. Shakspeare has said truly, that "brevity is the soul of wit;" by which he means, that the production in the smallest compass of words of the greatest quantity and aptness of thought at the very nick of time, is all in which it consists. In short, it depends upon such a felicity of expression, as will convey, without any explanatory commentary, a whole history in a single word. Hogarth did not tell the rich church-goers that they had no charity, that they gave nothing to the poor; nor did he set about to prove his insulting reproaches by a number of facts. No wisdom or sense would have appeared in that. But he established it by a minute and neglected circumstance, that spoke a volume in a word; he simply put a *cobweb over the mouth of the poor's-box*. Secretiveness was excited in addition; because the cobweb might mean nothing but a fact, or it might mean a great deal, just as circumstances might render it convenient or not to make use of the joke. More, in short, is meant than meets the eye. The spectator reads for himself. So is it with the story of Augustus, as stated by Lord Bacon; or of Louis XIV. and Lord Stair, as modernised by Mr. Combe. As king and ambassador bore a strong resemblance to each other, Louis chose to make the inference, that Stair's mother had played false, and he asked him if she had ever been in France? The reply was, although not very brilliant, being indeed somewhat obvious, still the very best which in the circumstances could possibly have been made—because, in answering "No, but my father was," Stair apparently simply narrated a fact, in his solicitude to furnish the king with information, while in that narrative he inferentially retorted the most severe reproof, and conveyed the idea that Louis was the son of Stair's father. Secretiveness, Cautiousness, and the intellect, are all gratified in this; because the answer, while it was most triumphant and complete by one obvious interpretation, was conceived in terms so happy as to enable the ambassador to appear innocent and respectful, or severe and caustic, just as he chose. Had Louis exclaimed, "How, sir! do you presume to say my mother was false to the king?" it was perfectly in Stair's power to have said, "May it please your majesty, there was no such stuff in my thoughts; I merely stated a matter of fact, in answer to your inquiry for information." Without further enumerating examples, we think it will be found to be true of all wit, that there is always concentration, double meaning, and concealment—the best adaptation of the best chosen means to secure the end proposed.

Mr. Combe has truly remarked, that mirth is produced by a simple gratification of an organ. An infant laughs at a brass button, and an acquisitive boy at the gift of a halfpenny. Praise makes Love of Approbation merry; and Secretiveness prompts the child to run to a hiding-place, where it laughs immoderately at its concealment from its nurse. Practical jokes are the joint production of Hope, Destructiveness, Secretiveness, and Self-Esteem. As we gradually ascend the scale of faculties, laughter becomes less the sign of gratification. We look upon the excitement with more placidity, with a higher, but a more sober pleasure. This is to be expected. The intellectual organs are much smaller than the passions, and their excitement is, of course, far less convulsive. That mankind do not concur even with regard to practical manifestations of the faculty, or in their ideas concerning the constitution and characteristics of Wit, is an evidence that the feeling of the ludicrous arises from a more universal principle than it has hitherto been supposed to do; that it can be confined to no particular class of faculties, and that from the variation of ludicrous perceptions, with a change of organic combination, almost every variety produces wit of its own species. It has been observed, that the pleasing exercise of some of the lower organs, unalloyed by the painful excitement of others, produces merriment of itself; and we believe this pleasant excitement to be the essential ingredient of all wit, being otherwise varied in its character only by the different kinds of intellectual organs, in connection with which, the pleasurable exercise of these lower organs is combined. Causality, Comparison, Eventuality, and the organ now under consideration, all present different turns of wit, each in their own kind happy and admirable, and all distinct and peculiar. By the simple exercise of the intellectual faculties alone, we in many cases feel merriment, even to laughter, when, according to the ordinary understanding of the meaning of the term

wit, there is no wit at all. A good logician will analyse his adversary's argument, strip it of the expletory language in which length of phrase conceals incongruity, and by presenting to the audience its naked contradictions, excite extreme mirth. A *reductio ad absurdum*, is the result of Causality alone, yet produces much merriment. We have known persons on whom Locke's controversial writings had this effect,—Locke, who so far as wit is concerned, is called the dullest of philosophers. In our view, Young's Night Thoughts contain more wit than any book in the English language, although they possess not one single mirthful thought. We would specify also the works of Jeremy Taylor and Cowley, and Lord Bacon's definition of a Christian, as equally replete with the happiest, tersest, and most unexpected turns of thought, concentrating an argument in a word, and expressing a whole history in a sentence. To produce wit, as to produce any manifestation of genius, requires the combination of rare gifts, with lucky external circumstances. "Brevity," observes Shakspeare, "is the soul of wit." It is, in truth, the extract or essence of thoughts and ideas. Its power lies chiefly in concentration; it may be defined as the perfection of thinking and expression, or the conveyance of a whole library of thought in a nutshell of words.

From these remarks, it will be seen that we do not regard wit as the product of one faculty, and that therefore it does not constitute the function of the organ now under consideration. It is situated in the Intellectual region, next Causality; and as both Messrs. Scott and Watson have attributed to it an important reflecting power, we shall postpone our further observations upon its probable function, until we come to speak of the other organs in that region.

SECTION IX.—Organ XXI. Imitation.

THE organ of Imitation is situated immediately upon each side of Benevolence, and is itself bounded by Wonder laterally. When it is fully developed, it is gently rounded off from Benevolence; and when large, it is on a level with it, giving the top of the head at that region a square or flat appearance. When it is very deficient, the head slopes rapidly on each side of Benevolence. The reader may observe it very large in the head of Victor Hugo (p. 75), who displays in his writings a very extraordinary manifestation of the faculty of Imitation.

About the real function of this organ, there seem to be many contending opinions; nor has any precise metaphysical analysis of it yet been given.

In the lower animals, as the parrot, starling, blackbird, and crow, we may observe a strong desire to express, in as far as their physical conformation will permit, whatever they hear; and in the monkey, and other animals, a tendency to represent what they see. In one man, we see a love of personating the voice; in another, the gesture; in a third, the expression, turn of thought, or style of language of his neighbour. We find also in man as well as beast, that while some imitate sound, they do not even try to represent motion, *et vice versa*. It is only in the *desire* to produce a representation that they agree, not in the particular objects of resemblance. From this it is to be inferred, that the faculty which they possess in common is not perceptive or reflective, but simply affective.

We may observe, that this organ is an extension of that of Benevolence; and in investigating the nature of all the organs in the coronal surface, we have found that their chief function is to produce states of the other faculties. Firmness begets fixity of action of particular organs, Conscientiousness harmony of action, Hope an agreeable excitement of the faculties. Wonder stimulates them to reproduce the objects of perception, and Benevolence superinduces a sympathy of emotion betwixt our own feelings and those of others. Probably Imitation has for its chief function a similar office, and may produce a sympathy of action. There is nothing so irresistible as Imitation. In infancy, it is largely developed; and there is no time of life at which sympathy of action is so peculiarly manifested. The child's first endeavour is to imitate the sound of its parent's voice; it then tries to mimic the lowing of cattle, the bleating of sheep, the barking of dogs, or the cries of poultry. When Miss becomes a little older, she has a doll like mamma's baby, and washes, dresses, and puts it to bed. Master's hobby-horse is an imitation of his father's hunter; he plays at soldiers, mimics the schoolmaster; or should an equestrian company arrive in town,

every boy in the place throws somersets. Some adults feel an irresistible desire to jump from the pit of the theatre on the stage and begin, and it is certain that there is no profession to which its votaries are driven by an inclination so powerful as that of an actor. Many persons in narrating an anecdote, or detailing even the most commonplace topic, insensibly dramatise the description; producing a copy, not an account, and a plan rather than a specification. This is irresistible, and seems to be a sympathy of action expressed by an external conformity of motion with the object. Action is the consequence of the operation of the faculties, and in the ratio of their size or activity will be the manifestation of the corresponding physical attitudes. However large, therefore, be the organ which produces sympathy of action, if that in whose action in another we are to sympathise, be small in us, the resemblance in expression will be feeble and defective. The actor cannot imitate with any success the language of those passions with which he is moderately endowed. If he have small Destructiveness, he will fail in expressing rage; and should his Benevolence be moderate, let him not attempt to represent kindness or goodness of heart. Secretiveness may repress the temporary action of those natural passions in the actor, the manifestation of which, would not be in harmony with the character represented; nothing, however, but the passions themselves in the performer, can successfully imitate those which are depicted in the subject of performance. This is so distinctly recognised, that there is a certain line to which each actor is carefully confined. The idea of Liston acting Hamlet, would be as absurd as to see Macready personating Jack Rag. It is said that Mrs. Siddons once acted the sprightly Lady Townly in so lugubrious a manner, that the audience appeared as if assembled at a funeral. No doubt, Imitation, which is mere expression, may present the dry bones and skeleton of a character. But unless the feelings of the actor be powerful in the particulars possessed by the character represented, there will be no genuine impersonation. It is on this account, that many actors whose passions are not in harmony with those of their parts, betake themselves to mere rant as a substitute for real emotion. Accordingly, before the time of Betterton, Hamlet, instead of his fears at the appearance of the Ghost reducing his speech to a whisper, was made to roar out as if he had been up to the hālberds for being drunk on his watch; and it was said of another actor, that "Richard never called more lustily for a horse, than he for 'Come sweet rest and innocent repose!'" To success in any of the fine arts, Imitation is indispensable; and it is a remark as old as the time of Demosthenes, that delivery is the soul of oratory. The art of giving exact expression to the feelings which agitate the speaker, is the true secret of exciting sympathy. Mankind are not satisfied with mere words which are not conveyed in appropriate accent and action. There is a sense of natural language which an orator cannot deceive. There is something in physiognomy, of which none of the perceptive faculties can be the instrument. The human eye, without changing its form, size, or colour, expresses an infinite variety of states of feeling. A smile, a frown, a curl of the lip, cannot be understood merely by the knowing organs. There is clearly some fine and delicate sense of natural language, which the perceptive faculties give us no notice of; a sort of speech which we cannot express or define, but which we all feel. Each passion has its emotions. Action is a universal language. The eyes are its vocabulary, the hands its syntax; it is wise by feature, eloquent by attitude. The lowering of the brow is its clamorous rage, the dimple of the cheek its boisterous joy. It is the free-masonry of entire humanity, the literature of nature—a book intelligible to all without translation, read by all without instruction. It is the trysting-tree of thought for the savage and the sage, and brings the whole world under the same mental latitude. Each passion, emotion, or affection, not only feels but expresses. When we are grieved we groan, in anguish we cry or howl, when tickled we laugh. The words spoken are nothing; the gesture, look, and tone, being added to fill up the picture. There is clearly, then, a sense of expression of the faculties; and in the ratio of the power of that sense, and of the size of the organs whose action is to be illustrated, will be the power, variety, and accuracy of expression. This sense stimulates the perceptive and reflecting faculties to assist it; and hence the amazing flexibility of voice, action, and countenance, which are uniformly combined with the love of mimicry. Hence it is, that he who is most addicted to personation, is the most careful and observant of expression in others, for the purpose of reproducing it.

We have called Imitation the organ of Sympathy of Action, and many circumstances conspire to corroborate us in the correctness of our definition. In treating of this organ Mr. Simpson remarks, "no one of its qualities has struck us more forcibly than its unconscious and almost automatic character. We have recently met with several instances of a high degree of the power being possessed unsuspected by the possessor." "This very quality of unconscious operation is sufficient of itself to demonstrate, that Imitation is a distinct primitive impulse of our nature. The manifest purpose of its being bestowed in a greater or less degree upon the whole human race, is to produce the general uniformity of being and acting, which is essential to the social character and progressive improvement of man. Imitation to *that* extent, no one can doubt, is purely automatic—altogether independent of the will and the reason." Piel notices a young idiot, who "has the most marked and *irresistible* inclination to imitate all that she sees done in her presence; she repeats *mechanically* all that she hears said, and imitates with the greatest fidelity the gestures and actions of others, without much regard to propriety." Dr. Gall notices a deaf and dumb boy, who imitated to the life all the officers in the asylum; and Mr. Haslam saw a male idiot, "who, a short time after he was admitted into the hospital, showed a great talent for counterfeiting the insane." Cabanis details certain extraordinary circumstances of the life of a man, "so restless, that he was forced to repeat all the movements and attitudes of which he was a witness. If he was prevented from yielding to this impulse, either by seizing his limbs, or by making him take contrary attitudes, he experienced insupportable agony; here, as we see, the faculty of imitation is carried to the extent of disease." Perhaps the case which most strikingly exemplifies the truth of the theory we have ventured to erect, that Imitation is, in truth, sympathy of action and expression, is the following, originally published in the *Philosophical Transactions* (No. 129), and also inserted in Dr. Plot's *Natural History of Staffordshire* (1686), p. 284. "But when this imitating quality is so very strong, it becomes involuntary, as it is in Donald Monro of Scrachbogie in Scotland, who pulls off his hat, and puts it on, wipes his nose, wrings his hands, stretches forth his arms, and imitates all other actions he sees other men do, though much against his will, with so much exactness, and such a natural and unaffected air, that no man can suspect he does it with design, and yet with so strong an impulse (as the reverend and learned Dr. Gordon informs us) that if his hands be held, he cannot forbear pressing to get himself free to do the same thing. Nay, so contrary to his mind does he ape these motions, that, to hide his infirmity, he casts down his eyes when he walks the streets, and turns them away when in company, wherein, too, it is hard to make him stay, once he finds himself observed." This talent reaches its highest point, when it enables the author to imitate not only the style of expression of others, but their peculiar language and cast of thought. Byron, and Thomson, and Beattie, have successfully copied the manner of Spenser; and Horace Smith, whose cast shows very large Imitation, in the *Rejected Addresses* presented the public with almost a fac-simile of all his contemporary authors. So did the Ettrick Shepherd.

Sympathy of expression, and sympathy of passion, are most appropriately blended; and it is to be expected that Benevolence and Imitation, immediately adjoining each other, should be each excited by its neighbour's action. Great actors are almost always distinguished by their lavish and prodigal Benevolence; a fact which, with reference to this subject, it is of much importance to notice.

We have already noticed the action of this sentiment in the lower animals, and we conclude our observations on the phenomena of this organ, by extracting from Mr. Combe's system, the quotation of Dr. Mason Good's account of its manifestation in the mocking-bird, premising that the facts stated seem too extraordinary not to be somewhat apocryphal. "Its own natural note, is delightfully musical and solemn; but beyond this it possesses an instinctive talent of imitating the note of every other kind of singing bird, and even the voice of every bird of prey, so exactly as to deceive the very kinds it attempts to mock. It is, moreover, playful enough to find amusement in the deception, and takes a pleasure in decoying smaller birds near it, by mimicking their notes, when it frightens them almost to death, or drives them away with all speed, by pouring upon them the screams of such other birds of prey as they most dread." We have quoted this passage in order to illustrate the great power of imitation in the lower animals; but we very much question whether it be physically possible for a small creature like the mocking-bird to imitate with

the slightest success the cries of large and powerful birds of prey. We think this to be as impracticable, as for a little boy to mimic the voice of a powerful full-grown man.

CHAPTER X.

ORDER II.—INTELLECTUAL FACULTIES.

Preliminary Observations upon the Organs and Faculties situated in the Anterior Lobe of the Brain.

WE now enter upon the consideration of the organs of the Intellectual Faculties. They are situated in the anterior lobe of the brain, and comprehend all of the head in front of Constructiveness, and below the organs of the sentiments in the coronal region. We formerly observed, that the brain consisted of two substances, the one enclosed within the other, of which the interior was called medullary, and the exterior cineritious, the latter being composed of numerous convolutions. We found that the depth of these convolutions and of this cineritious substance, was greatest in the most intelligent animals, and least in those which manifested little reason; from which it has been inferred that the cineritious is the thinking part of the brain, and, of course, that the deeper it is, the greater will be the amount of thought and feeling. It has occurred to many Phrenologists, that there must be some means of ascertaining, during life, from the external appearance of the skull, the depth of the cineritious matter; and they have observed that, by induction alone, manipulators have arrived at the conclusion, that there are other conditions of the size of particular regions of the brain than the mere depth from the surface to the *meatus auditorius*. The power of the organs in the coronal region is not estimated by simply measuring from the hole of the ear to the top of the head. The size of the organs of the moral sentiments has been found to depend mainly upon their height above Causality and Cautiousness. At these points a bony ridge runs along the external base of the entire coronal surface of the skull, which completely separates the sentiments from the propensities. If a standard of this kind exist in regard to these, it is to be expected that something of a similar nature will prevail in the measure of the intellectual region situated in the forehead. From the fact that the cineritious matter is the index of the extent of mental power, and that, not the depth from the surface of the skull to the bottom, but from the ridge running from Causality to Cautiousness upwards, has been found to be the best criterion of the energy of the moral sentiments, there is reason to conclude that these ridges are the boundaries of the thinking or sentient part of the moral region of the brain; and there is ground for the hypothesis, that as another standard than that of mere depth has been erected to discriminate the power of the feelings, nature has instituted a similar gauge for ascertaining the power of the intellectual organs. As there is warrant for inferring that the depth of the cineritious matter in the coronal surface is determined by the height of the skull above the ridge from Causality to Cautiousness, so we are inclined to conclude that the depth of the cineritious matter in the anterior lobe comprehending the intellectual region, is to be measured by the projection of the brain in front of the ridges which run up from the outer corner of the eyebrow, at the organ of Order to that of Tune, immediately at the angle of the forehead in front of the temples. It is certain that the mere appearance of a fair and broad forehead is not the accurate criterion of intellectual endowment, although undoubtedly, as indicating breadth or peripheral expansion, it is to be included in the estimate. An infant has a fine, fair, broad forehead, but almost nothing in front of the angle of the eyebrow. Its intellect has been little exercised, and it has not therefore redeemed the cineritious from the medullary substance, and pushed the brain outward by the tumefaction of cerebral excitement. Sheridan's forehead is neither flat nor broad, but the mass of brain in front of the angle of the eyebrow projects further than in that of almost any head in the

collection of the Phrenological Society. We have long been in the habit of trusting to this principle of measurement, and every fresh example gives us reason to entertain greater confidence in its truth. This projection is very large in the head of Julius Caesar, sketched at the end of this volume.

It is a general doctrine of Phrenologists, that the observing faculties, as they are called, are manifested long before the reflective powers. If this were true, then, it would be fatal to Phrenology, for there is nothing more certain than that Causality and Comparison are developed in the forehead of the infant to a much greater extent than Individuality and the other organs at the base of the forehead, in the region of the knowing faculties. Indeed, these latter organs are decidedly defective, while the reflecting faculties are as uniformly large. If the persons who propounded the theory above noticed, had paid the slightest attention to facts, instead of hunting after a mere hypothesis, they would have come to a very different conclusion. Children reflect to a much greater extent than they observe. The fault of children is that of being too rapid in drawing inferences. They are apt to reason upon the foundation of a very narrow basis of facts. Their defect is that of drawing conclusions from premises that are too slender. Hence it will be found, that children are wrong in their inferences, not from the corollary being illegitimately drawn from the predicate, but altogether because of their ignorance of a number of facts which render their premises false. Any one acquainted with children, must have observed that they are continually reasoning, concluding, inferring. It is quite absurd to say that they are mere observers. The defect—if that can be so called, which nature evidently intended—of their mind, is that it reasons before it has sufficiently observed. Accordingly, it will be found that every day, as a man grows older, the observing faculties get larger in their relative proportion to the size of the reflecting region, and he is careful to collect a greater number of facts before coming to a conclusion.

CHAPTER XI.

PERCEPTIVE FACULTIES.

DR. SPURZHEIM subdivided the Intellectual Faculties into three genera:—1st, The Senses; 2d, The Internal Faculties, which procure a knowledge of external objects, their physical qualities and relations; and 3d, The Reflective Faculties. We formerly assigned our reasons for discarding the first-named genus altogether from this Order. "Physicians," observes Bichat, "have not sufficiently distinguished passions and sensations. The former have connexion with exterior objects, and give birth to the latter, which are therefore mere agents, and communicate as conductors—the cause, but participating not in the effect. Every kind of impression has its centre in the brain; for all sensations imply impression and perception. Thus the senses receive the impression, and the brain perceives it; and as the impression quits this organ, its action is suspended, and sensation ceases." We are also of opinion, that the distinction hitherto drawn betwixt the second and third genus of intellectual faculties is unsound. We do not believe that there are any faculties assigned to the purpose of reflection; which, on the contrary, we are inclined to suspect is a compound process, produced by a peculiar combination of all the intellectual faculties, and that they are all perceptive, the more proper definition of them being the organs of Simple and Relative Perception. The organs of Simple Perception are at the base of the forehead, those of Relative Perception at the middle and upper part of it.

We also incline to the opinion, that there is no such thing as memory distinct from impression. Recollection depends on perception, and is not a conception or idea of a former impression, but a reproduction of the impression itself. When our eyes are shut, and our senses asleep, we are excluded from external impressions; the world around us is annihilated, and thoughts have nothing of the present, but depend upon the past. In our dreams the actual scenes of the day are reproduced. Some-

times, indeed, objects take an eccentric shape, and we suppose that we must have created them. But the mind cannot create, it can only combine past impressions eccentrically. A blind man has the organ of Colour, but he has no conception of a picture; nor a deaf person of music. Nay, Dr. Darwin observes, that persons who have had the use of sight and hearing up to a very recent period, cease, in a short time after they have been deprived of these senses, in their dreams to experience any consciousness of objects of sight or sound. But if the mind could create the impression of external appearances, the blind and deaf should be able to form conceptions of sights and sounds. True, we see objects, and are placed in situations in our dreams, to which we can find no parallel in our waking moments. But this is thus accounted for:—A painter, in order to produce a female figure of surpassing beauty, selected from nature and art all the most admirable portions of each study. He took the beautiful limb of one copy, the elegant hand of another, the eyes of a third, the nose of a fourth, the cheeks or lips of a fifth, and so on. When, following this principle, he had completed his picture, it was discovered to be absolutely hideous; the separate features which each possessed, harmonising with their own body, were beautiful and becoming; but when disjointed and recombined in new forms, horrible beyond what invention could have conceived. Thus it is with the mind. For impressions of external forms it is dependent upon the world without; but these once presented to it, they may be reproduced in a different order from their former arrangement. The colour which, on its first appearance to us, covered one object, may be reproduced with the figure of another. The radiant robes, the pearly complexion, and the golden locks which were associated, in their entry upon our minds, with the form of the seraphim, may be reproduced as with the countenance of the devil, making Satan more hideous; while an angel, with the visage of heaven, may walk in the sable hue of hell, making virtue horrible by its incongruous habiliments. Or the head and face of beautiful infancy may be combined with the bending frame and tottering limbs of extreme old age; changing innocence into the expression of idiocy, and the sober port of matured experience into the fantastic gambols of childhood. In short, all the diableries which pass for mental creations, are but the dissociated elements of former external impressions, reproduced in new, unnatural, and inharmonious combinations. Spectral illusions also prove that our recollections are not mere ideas or conceptions of former objects, but past perceptions reproduced; for it is certain that the spectrum is as complete as when originally seen, and appears quite involuntarily, as if it had lain a dormant impression until reproduced by some extraordinary cerebral stimulus.

The recollection of any impression can be nothing else than the original. We cannot remember what we never saw, any thing else than what we saw, or in any other manner than as we saw. If it be otherwise, it is not memory, but creation. If the impression have been obliterated, how can its image return? if it be not, then its recall is but the retained impress reproduced when the brain is re-stimulated.

The power of reproduction depends upon the vividness of the impression. That is remembered best which was most striking when it happened. A man never forgets the particulars of his shipwreck, his escape from a fire, his recovery of a large fortune, or his presentation to an office. "I remember it well," says he, "for it made a deep impression on me at the time." When the marches of the estates of great proprietors were fixed, according to ancient Scottish custom, the little boys of the parish were collected, and soundly whipped at the boundaries, as the best means of enabling them to remember their geography in after life, and to bear testimony to the locality, in the event of a dispute arising as to the extent of a particular property.

The vividness of the impression depends upon the size of the perceptive organ. A man with small Combativeness, Destructiveness, and Self-Esteem, is brow-beaten and insulted,—it hardly agitates him at all; another has these organs large,—his rage is a phrensy. There can be little doubt which of these would most easily reproduce his feelings. Mr. Milne, whose organ of Colour was so exceedingly small as not to project beyond the eyeball, could not *perceive* colours, and never was able to see that green was different from blue. A man, in like manner, with very small Tune, does not perceive harmony or melody; and cannot, even when he hears them, distinguish one tune from another. A fine painter or musician, on the contrary, possesses the power of remembering colours, or sounds, in the exact ratio of the power of his *perception* of them. Ann Ormerod heard the sounds of music as distinctly

as Handel, but they appeared to her as a disagreeable and confused noise. So, Mr. Fergusson, whose organ of Size was very small, not only did not remember, but did not perceive distances, the landscape presenting itself to his eyes as a flat surface.

The same thing occurs in purely intellectual processes. If a person detail accurately a sermon or lecture he has heard, it is said that he must have paid great attention to the orator; or, in other words, the subject must have made a vivid impression before it could be so precisely reproduced. If the recollection of a circumstance were a totally different thing from the original impression, none of those concurrent events with which it was originally associated would help us to the remembrance of it, because the impressions themselves are, in the hypothesis, assumed to have been obliterated. But we find, that if an individual endeavour to call a circumstance to our recollection, he instinctively begins to detail the time when, place where, and persons in whose company it occurred, and straightway we remember all, when the original impressions with which it was associated are again recounted. The old woman who showed Roslin Chapel had got off by heart a history of it, which she repeated fluently; but if interrupted in her story, she could not go on without commencing at the beginning again. This shows, that the order of the original impression becomes the order of reproduction, and that thus they are inferentially identical. It is thus with processes of pure ratiocination. We are inclined to think that reasoning, or genius of any kind, arises not from creation of ideas, but simply from a recombination of impressions. We perceive existences, we perceive their relations, we perceive antecedents and consequents; we detect resemblances betwixt different sets of sequences, relations, and existences. These perceptions combined, produce an integral idea, as the joint action of Form, Size, Weight, and Colour, produces a new impression, called a figure or an object. Our whole mind, therefore, is a mere storehouse of impressions made from without, which, by the action of the mind, are reproduced in new combination, and are thus called creations. One impression is allied to another, with which it was not originally associated, and thus a new image or thought is produced. And thus the highest order of mind, clothed almost with inspiration, is simply that on which the most numerous impressions have been made, and which has been most active in reproducing them in new and eccentric combination so as to form an intellectual or external image, itself to become an impression, and to be reproduced as an original thought. The combined action of a number of perceptive faculties, simple and relative, produces an idea or conception different from that which results from their separate or individual action; this idea is perceived, we think, by Eventuality, as the impression of a thought, in the same way that an object, presented to the organ of Form, is seen as the *image* or *spectrum* of a figure. Many of these thoughts, reproduced in a different series, coalesce, and a fresh idea becomes an impression, which also in future plays its part. We are often deceived with the idea, that thoughts presented to our consciousness have never occurred to us before, when simply we have forgotten the time, place, and circumstances associated with their first presentation, which individualised them, as it were, in the mind as substantive conceptions. This particularly occurred with Priestley, who wrote the same treatise twice over, having forgotten the first occasion on which the theory was impressed on his mind. So also we are inclined to think, that Shakspeare excels other men chiefly in the accurate reproduction of all the minutiae of his original impressions; so that while other poets *describe* a passion, he presents it exactly in the vivid reality with which it was first perceived by his intellect.

From these facts, it follows that there are as many different kinds of memory as of intellectual faculties. By not attending to this circumstance, a general misconception has arisen, that all who remember the same occurrence, remember the same thing. But much passes for memory which is not so. An individual will declare that a fact existed in a particular manner, simply because, although he had no recollection of the occurrence, he, by excluding all other modes of its existence, merely *inferred* that the form in which he had shaped it was the true one. Persons, too, frequently appear to remember precisely what the conduct and conversation of an individual were upon a specific occasion, when in truth they merely, from their knowledge of his character, knew what *would* be his behaviour. Twenty persons who have seen a picture, recognise it after a long interval, and suppose that each has the same power of memory, when probably not two recognise the same thing.

One man sees the same subject, another the same number of figures, a third the same style of colouring, and a fourth the same visual expression, and each calls this by the general term of recollection of the picture. So, of series of ideas. Large Comparison remembers the analogies, Causality the sequences, Language the very words, and Order the arrangement. All are supposed to recollect the same dissertation, while, were the individual who recollected the words asked to give an account of the argument, he would utterly fail.

From the fact, that all thought, knowledge, and fancy, arise from new combinations of past impressions being reproduced to the consciousness, and that the accuracy and perfection of the reminiscence depends upon the vivacity and comprehensiveness of the original impression, it results, that the more vivid the original perceptions either of mere thought or of the external world are, the more copious and accurate, memory, thought, and perception become. Men who merely think, and do not speak—who reason, but do not write, have not their ideas impressed upon their minds with the vividness and clearness which the adjunctive aids of time, place, and circumstance, the passion of Combativeness, the orderly array of chosen and well-defined language, lend to the depth of their impressions, and thus all their past reasoning is cast behind them and comparatively lost. “Who has not passed over with his eye,” observes Coleridge, “a hundred passages, without offence, which he yet could not have even read aloud, or have heard so read by another person, without an inward struggle? In mere passive silent reading, the thoughts remain mere thoughts, and these, too, not our own—phantoms with no attribute of place, no sense of appropriation, that flit over the consciousness as shadows over the grass or young corn in an April day. But even the sound of our own or another’s voice takes them out of that lifeless twilight realm of thought which is the confine, the *intermundium*, as it were, of existence and non-existence.” Persons whose ideas are caught as they float or fly through their minds by circumstances which give them a substantial existence, and by language which imparts to them a corporeal form and pressure, never lose a single thought which appears to their consciousness; and thus, when the occasion calls for it, they can, from their well-protected storehouse, produce every idea which they ever formed, and exhibit an aptness of cogitation which never presents them unprepared. In that man who appears to speak most clearly, directly, and exclusively to the peculiar subject in hand, it will be found that the entire discourse is made up of matured general principles and statements, admitted and assumed to be known to his auditory, which are applied to the determination of the peculiar circumstances of the specific subject of investigation. Reflection and ratiocination, hitherto considered as peculiarly internal and self-originating, we trust subsequently to be enabled to show, are mere perceptions of relation; and that the most cogent or severe logic is nothing whatever but a mere statement of fact, arising generally from a perception of sequence or resemblance. Thus, when it is said, man is mortal, the discovery is the result merely of experience; when we add John is a man, therefore John is mortal, we make this an inference, simply from perceiving the resemblance of man to John, and that what is true of the whole is true of a part; a conclusion at which we have arrived, solely from having found that proposition true as matter of fact.

We here leave this subject for the present, and shall reserve the rest of our observations until we come to treat of the functions of the Reflective Faculties.

SECTION I.—*Organ XXII. Individuality.*

THE first effort of mind seems to be the experience of the feeling of pain; then of the more articulated consciousness implied in the sensations of hunger and thirst, heat and cold, and so forth. As persons often feel hungry when the stomach is full, so they not unfrequently experience the sensation of cold, when their bodies are warm to feverishness, and possess a delusive feeling of oppression in their breathing when the air is quite pure, or smell strange odours when the external world sends nothing to their nostrils. We incline, therefore, to the opinion, that these sensations are mental; dependent for their excitement, when in a healthy state, unquestionably upon the condition of the body, as Alimentiveness is affected by the nerves of the

stomach, or Colour by the optic nerves, but still acting independently of these in the reproduction of sensations, and when diseased, even defying the state of the corporeal system altogether.

The next mental process is that whereby we take cognizance of the external world, and observe the phenomena of matter. In treating of the organ, upon the consideration of which we have just entered, Mr. Combe observes, "In surveying the external world, we may consider, first, objects simply as substances or existences, such as a rock, a horse, a tree, a man; these perceptions are designated by substantives;—in the next place, the properties and relations of things which exist, such as their form, size, weight, and colour. After these perceptions, we may notice their active phenomena; the rock falls, the horse runs, the tree grows, the man walks; these actions are designated by active verbs. As size, form, weight, and colour, are adjuncts of physical existence; time is an adjunct of action. Now, the faculty of Individuality renders us observant of objects which exist; it gives the notion of substance, and forms the class of ideas represented by substantive nouns, when used without an adjective, as *rock, man, horse.*" Now, in surveying the external world, it is certain that we do not observe, first, objects simply as substances; and second, their properties or attributes, such as their size, form, or colour. On the contrary, what is first seen, or discriminated rather, is simply a colour, and afterwards we mark its outline, as square, round, or oblong. By touch we detect its density; and, by handling, its weight. We, therefore, even assuming the correctness of Mr. Combe's idea of the term substance, observe general properties first, and then their aggregated form in an object or existence. But as the true inquiry is, not *what* we first observe, but the means by which we observe it; so the finding out of what we perceive, will lead us but a little way in ascertaining the faculties whereby the operation is performed. The question at issue, is not what exists, but what we observe. For the purpose of pursuing the investigation, we here insert the following narrative of a chemical experiment. "If a piece of silver," says Bakewell, in his *Natural Evidence of a Future Life*, "be immersed in diluted nitric acid, the affinity of the acid to the metal will occasion them to unite, a brisk action will ensue, and in a short time the silver will be entirely dissolved. The liquid will remain as limpid as before, and will present no difference in its appearance to indicate a change. What, then, has become of the solid piece of silver that was placed in the liquid? Its hardness, its lustre, its tenacity, its specific gravity, all the characteristics which distinguish it as a metal are gone; its very form has vanished; and the hard, splendid, ponderous, and opaque metal, that but a few minutes since was immersed in the mixture, is apparently annihilated. Must we conclude that the metal is destroyed, because its presence is unappreciable by our senses? The reproduction of the silver may be effected by introducing some pieces of copper into the solution, to which metal the acid has a stronger affinity than to the silver, and the latter will consequently be disengaged and fall to the bottom in small brilliant metallic crystals. The quantity thus deposited will be found to correspond exactly with the weight of the metal dissolved; and if the minute particles be melted and cast into the same shape that the piece of silver presented before the solution, it will be reproduced, not only the same in substance and endued with the same properties it possessed before its disappearance in the acid, but even in its pristine form!" Now, here a piece of silver, a shilling for example, round, white, hard, thick, rough in the edges, with the monarch's face upon it, is put in a glass of nitric acid which exactly resembles water. In a little time we see nothing whatever but the limpid liquid. To a certainty, the substance or object called a shilling, is there as absolutely and as much, to all intents and purposes, as ever it was; but we as certainly do not see it, or appreciate its existence in any shape whatever. The abstraction called a substance is therefore invisible, and there is not a single observing faculty we possess that can detect its existence. And why? What has occurred to render it unappreciable? Simply this, that all those properties or attributes of objects which Mr. Combe supposes to be the second thing observed, are taken from it. It has, to our senses, no size, no weight, no colour, no density, no form, no figure. These are taken away, and the substance, so far as our observation is concerned, is annihilated; restore them, and we perceive a shilling. It is clear, then, that we do not, and cannot perceive what Mr. Combe terms a substance; and that we see only its properties in combination, such as the roundness, hardness, weight, density, whiteness, and superficial extension. Had it no colour

or shade, we would not see it, although its other qualities might enable us to feel it. We do not, then, first see a substance or existence, and then its qualities. Take these away, and we see nothing; nay, perhaps, there is nothing. If, then, we do not perceive an object simply as such, there can be no possible evidence for the existence of an organ which has the perception of substances for its function; and so, Individuality cannot be the organ whereby we appreciate existences. But it may be contended, as we have heard, that the attributes of matter are not matter itself; and that it does not follow, because substance, divested of its qualities, is not appreciable, that therefore when its qualities are superadded, we can see nothing but its qualities. This is easily answered. The term matter, in so far as our perception is concerned, is an abstraction of the mind, having no real presence to our senses, and being a mere philosophical generalization, adopted to designate a variety of single phenomena, called colour, extension, gravity, density, &c. in various combinations, to which we give that aggregated nomenclature. "What it is," remarks Dr. Thomas Brown, "independent of our perception, we know not; but as the subject of our perception, we regard it as that which is extended, and consequently divisible, impenetrable, mobile; and these, or whatever other qualities we may think it necessary to include for expressing the particular substances that affect our senses variously, constitute our whole definition of matter, because in truth they constitute our whole knowledge of it." There can be nothing more true than this, or more conclusive of the proposition, that we do not perceive an object as what Mr. Combe calls a substance or existence, but merely perceive colour, size, weight, form, in certain combinations; and having faculties for these perceptions, independently of Individuality altogether, that organ has nothing to do with our observations of the external world, so far as the mere object is concerned.

We have heard it used as an argument for Mr. Combe's theory, that, at our first glance of matter, we perceive an object before we can tell what size or colour it is. What! because at first we cannot tell what it is we see, shall we say that it is any thing else than what it is? or that because the savage, when he first gazes at the stars through a telescope, is ignorant that powerful lenses intervene betwixt his eyes and them, it is not therefore by their means that he sees? or because, when an individual takes his first glance at a flower, he cannot tell what its colour, form, and size are, it is any thing else than these that he actually beholds?

Having inquired what Individuality is not, we may now shortly consider what it is. Situated immediately above the root of the nose, it is exactly in the centre of the Knowing Faculties, which, as it were, locally converge towards it. Hence we may infer, that it is some governing organ, acted upon in connection with all the rest. The term, Individuality, means simply the faculty of distinguishing those peculiar combinations of circumstance in an object which distinguish it from all others. It means an idiosyncrasy in the coalition of the general attributes of an object, which enables the spectator to remark that it is not the same as any other. If it were the same, indeed, it could not be individualised, because not distinguished. The organ of Order perceives arrangement; that of Language, the phenomena of sound in words; that of Form, the outline; of Colour, the hue; and so forth. But these organs act separately, and accordingly there is nothing more common than to hear incoherent statements, and an enumeration of various particulars, bound together by no common principle. Thus, the parrot, by a good endowment of the organ of Language, utters a great many words, but attaches to them no ideas; thus, an individual can remember many faces, but fails to connect with them the names of their owners; or, thus, one may remember many historical events, and have at the same time a knowledge of all days, weeks, months, years, and centuries, yet utterly fail to associate particular occurrences with their appropriate dates. Here there is evidently a defect of individualising power, and all that is exhibited is a sort of lumber-room of memory, in which all sorts of articles are thrust in together, without any regard to their natural relations. Now, we consider the function of Individuality to be, to connect together the various simple attributes and relations of an object by which it is distinguished from all others. Thus, for example, Language may remember the words "Daniel O'Connell," simply as words; and Form may reproduce certain features, unconnected with any mind or character, while it is the office of Individuality to join these together, and to link political events,—a peculiar mind, a certain figure and face, and the words "Daniel O'Connell," together, and associate them so as

to form the individualised combination of attributes which constitute the compound idea of this singular man. Language knows the word "horse," and Form perceives a certain quadruped, while other organs cognise certain habits, instincts, and powers which it possesses. Yet all these organs might notice each its own particulars, and produce no combined conception. Individuality, then, comes to the aid of the intellect, relates the word to the form, both of these to the habits, instincts, and powers of the animal, and individualises it by a complete conception of all its idiosyncrasies of attribute. Thus, a lawyer may, by his organ of Language, remember the words "*Brown versus Smith*," and also "*Vesey's Reports*;" Number may remember the figures "*3d May, 1836*," and the Reflecting faculties may preserve a distinct recollection of subtle points in a certain question of the Law of Insurance. But there is nothing in these organs which should associate these various points, and it requires Individuality to connect "*Brown versus Smith*" with "*Vesey's Reports*," the "*3d May, 1836*," and the question which was involved in the case as in point of a depending action. So in Botany, for example, Language may remember every name in the catalogue of Linnaeus; and Form, Colour, and other organs may recognise every flower in his herbarium; but it requires powerful Individuality to connect each flower with the name that belongs to it, whilst Order and the simple perceptive powers are necessary to place it in its class, genus, and species. It is in consequence of a great defect of Individuality, and of a large development of Language, that many persons are so much addicted to the use of a number of hard words, while they so woefully misconceive their meaning. Persons who speak the unknown tongues furnish a felicitous example of the excitement of Language alone, without Individuality, the words being associated in the mind with no ideas whatever. When we come to consider the organ of Language, we shall have occasion to show, that Individuality is essentially necessary to the production of a successful linguist, by being indispensable to the relation of the sounds with the sense they were intended to convey. Memory, in the accepted meaning of the term, is more applicable to this organ than to any other. Few persons are forgetful of attributes, in their detached form. They can produce thousands of words, numbers, dates, forms, shapes, sizes; but are incompetent to their production in the orderly combination which individualises any object or occurrence. To remember the Revolution, is one thing; but it requires Individuality to connect with it the date in which it occurred, and the names of the personages by whose instrumentality it was produced. Language can remember every Latin or Greek word, but Individuality is required to connect these with the corresponding English terms, and to attach to them the ideas they convey. The man of minute knowledge—the Individualist, in short, is he who has a strong connecting memory, by which all circumstances that distinguish one object from another, are combined in a simultaneous recollection, so that a man's face shall at once recall his name, profession, character, abode, relations, habits, and biography. Without Individuality, all these things may be recollected separately, if the organs of simple perception be large; but it requires that organ to connect them into the one whole idea or conception of a particular individual.

In the last edition of Mr. Combe's system, we find these views virtually acknowledged to be correct, under the head of "*General Observations on the Knowing Organs*," and cannot help expressing our surprise, that the writer should have carefully excluded all notice of the theory, from his treatise on Individuality itself, where alone it could be of importance. It was by mere chance that we found the passage, after having written what appears above. As, however, the theory is somewhat modified in Mr. Combe's observations, and he maintains doctrines which appear to us quite inconsistent with it, in his dissertation upon the functions of the organ of Individuality itself, our criticism upon his views is still perfectly pertinent, and we only notice the subsequent observations, to point them out as a refutation of his opinion made by himself.

The uses of this organ will be very easily understood from the foregoing analysis. Individuality produces the power of combining, in one conception, attributes which have no consequential relation, and which possess no natural suggesting relations. It connects the capricious names of botany or anatomy, with plants or parts of the physical system, combines events with their dates, words with ideas, and forms with other attributes. It is only a connecting principle, and does not stand as sponsor for other faculties. If Language be small, while Form is large, it will not act as

substitute for, or prompter of the organ of words, and associate the name "Thomas Brown" with a certain face. If Language be powerful, the name "Thomas Brown" will be remembered; if Form be large, a certain countenance will be recognised at once; but if Individuality be small, the name will not be suggested simultaneously with the face, or associated with it. If Individuality be large, the one will instantly produce the recollection of the other, provided Language be also large. If Language be small, the connecting power of Individuality will of course be unavailing, because one of the objects to be connected is forgotten by the appropriate organ.

We formerly cautioned students against the deception into which they are often carried by the appearance of a retreating forehead, which is produced by a very large endowment of the Perceptive organs, as they have been called; and we also observed, that the organ of Individuality was the chief seat of the frontal sinus in adults. The size of the organ is to be estimated by the breadth of the forehead, immediately above the root of the nose; and also by the length of brain forward from the external angle of the eyebrow to the root of the nose. In Sheridan, this projection is very great, in combination with fine Eventuality, large Language, Comparison, Size, Weight, and Locality. The anterior lobe is, indeed, quite extraordinary in point of length. In the diagram here exhibited, also, of the head of Pope Martin V., a man remarkable for his practical talents of business, the organ of Individuality is equally distinguishable for its great size.



SECTION II.—Organ XXIII. Form.

UPON inspecting a human skull, we observe that the Intellectual Faculties are rested upon a sort of table or ledge, which at the back part commences with a sort of step or rise in the base of the skull. This step is continued forward to the verge of the forehead; and in the centre of the front of the head, at the bottom, they shelve downwards into and towards the root of the nose. At the base of this osseous valley, is situated, on each side of, and contiguous to the *crista galli*, the organ of Form. In proportion to the quantity of brain of which the organ is composed, is its weight and pressure upon the outer sides of this hollow; and upon the principle that the hard parts yield, the bone is extended outwards laterally, so that the root of the nose is enlarged in breadth, and separates more widely the eyes, the distance betwixt the inner *cornea* of which may be considered as a pretty accurate indication of the size of the organ. The depth of the nose at the root from the corner of the eye outwards, must be also included in the estimate, as it is probable that the enlargement of the organ would push the bone outward. The depth of Canova's nose at this point, is much more conspicuous than its breadth.

It is the faculty which perceives configuration or outline. It takes cognisance of profile, shapes and shadows, circles, squares, and oblongs. It deals in line, figure,

contour, and is necessary to the sketcher. The talent for cutting out likenesses on paper, depends upon it. It produces neither expression nor perspective; as may be seen in the Chinese, in whom it is large. By itself, it will not produce a good likeness even in profile. Secretiveness and Imitation are absolutely necessary to stimulate it to observe the peculiar expression of any countenance; which require, moreover, to be assisted by a harmony betwixt the faculties of the painter and his study. He will otherwise leave out the nicer and more delicate shades of expression. The organ greatly assists the milliner. It is said to produce a preference for pictures in which the human figure is produced, as Size gives a predilection for landscape. Sergeant Ferguson, of the Police Court, as appears from the newspapers, possessed "acute habits of observation, and a most tenacious memory for features, which rendered him of essential service in proving the identity of the various criminals whose lot it was to figure at that bar. It appeared, indeed, that he had the rare faculty of remembering every face he had once seen, however long the interval." This power must have proceeded from large Imitation, Secretiveness, Individuality, and Form. The latter organ is supposed by Spurzheim to assist in producing the crystallographer, and to form conceptions of roughness or smoothness.

George III., who never forgot a face he had once seen, possessed an enormous development of Form; and it was equally conspicuous in Cuvier, whose "memory was particularly remarkable in what related to forms, considered in the widest sense of the word;" as also in Bewick, the great wood-engraver. "His eyes," observes Audubon, "were placed farther apart than those of any man I have ever seen." It has been observed to be large in Montaigne and Sterne, and to have produced their peculiar minuteness of description of the persons whom they introduce. But Secretiveness, Imitation, and Individuality, seem to be required, in order to produce a characteristic and graphic picture. Mere Form in a painter or novelist, is like mere Imitation in the actor, who may mimic a *passion* to the life, but who, if wanting other requisites, will fail to make it harmonise with the character he is personating. It will be anger or pride in the abstract, not the anger of Othello or the pride of Coriolanus.

Where Form is large in children, they very soon become accustomed to the appearance or *physiognomy* of words, and recognise them, without reference to the mere letters, by their general aspect. When they are called upon to spell them, they have present to them their very *simulacrum*. So it is often with grown persons, who, when they are uncertain as to the spelling of a word, know at once the proper letters by writing it, and seeing what appearance it presents. The organ of Language assists in spelling, principally by giving a vivid conception of the sound of the letters in the combinations of words. Individuals, deficient in Language and Form, will be found, under the advantages of the best education, to make very indifferent spellers. Dr. Spurzheim ascribes to Form the "power which disposes us to give a figure to every being and conception of our minds; that of an old man, to God; to Death, that of a skeleton; and so on."

"Gall," observes Vimont, "has made no effort to discover the seat of this organ in the lower animals. I believe I have detected it, in comparing the development of two dogs of the same age and genus. One of them had so large an endowment of it, that after an absence of sixteen months, he perfectly recognised the gentleman from whom I got him, although he was very young at the time he changed masters." Dogs seem indeed to know perfectly by their master's face whether he is pleased or angry; and monkeys, horses, elephants, and some birds, easily recognise their owners. The tones of their voice, and their smell, perhaps operate even more strongly in the recognition than even their figures. Indeed, it may be seen, that dogs bark at their masters so long as they merely see them, but are subdued the moment they hear the voice and smell them.

From many observations, we incline to the opinion, that Form merely perceives the outline of faces or objects; the *faculties* of *physiognomy*, if we may use the expression, rather than their states. The outline of the profile shall be correctly given, while the habitual expression of the individual shall be altogether wanting. The statuary of the face, its anatomy shall be all there; while the passions that play around it, and the moods in which it sets itself, shall be nowhere seen. So, on the other hand, have we observed artists, who have missed the outline of the subject, yet preserved the expression; made, as it were, a caricature of the face; in which the true feelings, and

the prevailing passions of the man it was impossible to mistake; while, at the same time, the drawing and the outline were totally false. It were well that some Phrenologist, a painter, should investigate this subject further.

SECTION III.—*Organ XXIV. Size.*

THE organ of size is situated immediately above that of Form. The cornea of the eyes are situated exactly at the root, the narrowest part of the nose. From that point, the brain, where the organ of size is large, widens on each side of the bone of the nose up to the eyebrow; and the depth from the bridge of the nose, inward to the eye, is considerable. Its size is best seen when the subject of manipulation elevates his eyebrows. In individuals who possess a very small endowment of this organ, the nose does not get any broader above the cornea of the eyes.

It is this organ which perceives the bulk of bodies, superficial expansion, length, breadth, and thickness, or extension. It enables us to judge of distance, and to measure by the eye. One individual, when he enters a room, can tell its length, breadth, and height to an inch; while its occupant may, perhaps, not guess within a yard; and an expert marker in a regiment of dragoons, will take up a position for a troop or squadron to wheel to, estimated with so much accuracy, that there is not too little room, but, at the same time, no ground for a single additional trooper. So, an eye shall be so precise, that its owner will draw a circle by it alone, with great correctness; and while an excellent theoretical Phrenologist shall not, after much practice, be able to manipulate with any thing like accuracy,—another, with large Size, shall master the measurement of the organs in six months. The organ estimates the capacity of vessels; and is, along with Form, found always large in expert glass-blowers.

The sense of Perspective, which is simply that of extension, depends on this organ. If a man, when he looks at a street, cannot tell whether it be fifty feet, or fifty yards in length, it is quite clear, that he does not *perceive* elongation. Accordingly, Mr. Ferguson, in whose mask the organ is very small, saw, in a landscape, nothing but a number of objects on a flat surface. If a man cannot tell whether an object be a foot or a furlong from him, it is indeed clear, that objects, placed at each of these distances, will present to him no appearance of greater or less remoteness.

Size is, of course, a chief element in the estimation of proportion. By means of Comparison, Individuality, and other organs, we observe that there are certain general laws which prevail, and which we erect as standards to measure each individual example. When applied to figure, to which we are directed by the organ of Size, we observe that there is a certain general average of superficies. Thus, for example, we remark, that usually the legs of the human animal, are as long as the body. In this respect, we perceive a resemblance among mankind. If the body be longer than the legs in a very perceptible degree, they are said to be out of proportion. Had we never seen but one man, the idea of disproportion would not have entered our minds; and, accordingly, when we see a crocodile with a body ten times the length of its legs, we remark nothing extravagant in it. So of all superficial phenomena. The organ of Size merely tells us what their extent is, but does not judge whether they be in due proportion. It tells Comparison and Individuality, that men, in general, are five feet seven inches in height. They fix that standard. If it see a man seven feet high, it tells them that he is so, but does no more. Comparison, Individuality, and Eventuality, pronounce this height to vary from the average, and the feelings are astonished at it. But there are other proportions in which Size has no share. The introduction of a number of thick strong pillars in support of a light, airy building, is pronounced, by the organ which takes cognisance of *resistance*, to be disproportioned to the weight to be supported. An excess of cold or warm hues, displeases Colour, because it is more than is generally seen. So of Order. There may be excess of arrangement, in comparison to the other qualities of scenes, and the view degenerate into formality,—the rural simplicity of the landscape, so starting with art and the hand of man, in clipped hedge-rows, artificial parterres, diamond plots, and circular flower-beds, that nature is lost. But so completely are these points of

proportion a mere question of general average of appearances, that a drill-sergeant, who, by himself on the street, appears formal, stiff, and unnatural, strikes us in no such light when he is marching with his regiment. On the contrary, the regularity of all the movements, is a subject of admiration, not of ridicule.

Vimont divides this organ into two; the one of which he calls *Size*, the other *Distance*. The former, he states to be nearest the root of the nose, and the latter contiguous to the organ of *Weight*. "I have," says he, "been led to the discovery of this faculty (*Distance*), by the observation of the habits of certain animals, and some facts selected from the phenomena of human action. I cannot conceive how the faculty of *Size* should be confounded with that of *Distance*; the one may exist independently of the other. To estimate the size or volume of bodies, is to form a conception of all the points of their superficies; while distance consists altogether of the interval which takes place betwixt two points of a body, or that which occurs betwixt two objects placed in different situations." We are not at all convinced of the soundness of this distinction, nor do the illustrations of Vimont throw any light upon his meaning. We think, however, that we have seen in some individuals, singular for their power of measuring dimensions, a very large amount of brain occupying the space from the inner cornea of the eyes to the sides of the nose immediately above the root, forming a sort of triangular vacuum betwixt the inner side of the eyelid and the eyebrow, which hardly appears to form part of the organ of *Size*. Whether these parts of the brain are disjoined, however, we have not yet discovered.

The lower animals possess the organ of *Size* in large endowment. The eagle makes his stoop, the hunter his leap, the lion his spring, with the nicest precision, and from the most delicate sense of the exact distance each has to dart upon the prey. A good hunter will, in every hedge or gate that he clears, estimate the height so exactly, that in every case he will leap the net distance, and not an inch more or less.

Another organ has been announced by Vimont as his discovery, which he calls the "*Geometrical Sense*." "If we examine," he continues, "with care the manner in which certain animals travel or fly, we will find that there exists among them extraordinary differences. Pigeons, crows, and larks, fly in squadrons, and without any arrangement; as is also the case with starlings, sparrows, and geese. There are other birds, on the contrary, which walk, swim, or fly, in a precise and regular order. The sea-duck often form, on the surface of the ocean, long black lines of the utmost regularity. All who have noticed birds of passage in their flight, must have been struck with those kinds of geometrical figures which certain species describe in the air, most commonly in the form of a very accurate triangle." He then observes, that in all animals of this description, will be found a development of the brain quite marked, at that part which in man corresponds to the outer edge of the organ of *Size*, pressing downwards upon the eye. He also inquires if the faculty exists in man, and contributes to form, alone or combined with other organs, the talent for geometry. In Sir Isaac Newton this part is very prominent, as also in Watt, and several excellent geometricians with whom we have conversed. We are acquainted with a very profound geometrician, in whom it is large, and who declares that while he perceives at a glance all propositions connected with pure geometry, he has always found arithmetic extremely irksome and difficult. His organ of *Locality* and the *Reflecting Faculties* are nothing more than respectable. It is certain, that Zhero Colburn and George Bidder, with wonderful arithmetical talents, could make nothing of mathematics; and we know an individual in whom *Size* and *Locality* are very large, *Number* full, and the *Reflecting Faculties* rather large, or large, who has made very poor progress in geometry. We however abstain from drawing from these very limited observations any conclusion, and only invite the assistance of other Phrenologists to a further investigation of the phenomena.

SECTION IV.—*Organ XXV. Weight.*

THE organ of *Weight* is situated near the centre of the arch of the eyebrow, immediately on the outward side of that of *Size*; and its power is indicated both by the extent of the eyebrow, and by the projection of the brain outward, above, and over the eye.

Mr. Simpson has found the organ large in Chalmers, Brewster, Hall, Mackenzie, Leslie, Whewell, Farish, and Sir Isaac Newton, and in all eminent engineers. He conceives that its function is to give the sense of equilibrium, and that its higher manifestations are seen in skill in dynamics, and knowledge of the application of mechanical forces. Mr. Combe thinks, that "Statics, or that branch of mathematics which considers the motion of bodies arising from gravity, probably belongs to it. Persons in whom Individuality, Size, Weight, and Locality are large, have generally a talent for engineering, and those branches of mechanics which consist in the application of forces; they delight in steam-engines, water-wheels, and turning-lathes. The same combination occurs in persons distinguished for successful execution of difficult feats in skating, in which the regulation of equilibrium is an important element. Constructiveness, when Weight is small, leads to rearing still fabrics, rather than fabricating working machinery. Sir George Mackenzie proposes the name Resistance, as more descriptive of the function of the organ; and in this, is supported by Vimont and the French Phrenologists."

Mr. Simpson mentions Miss S. L., who, attacked with headach, found it very powerful at the organ of Weight. Her perception of equilibrium was deranged; she said she felt as if tipsy, the floor and ceiling assuming an approach to the perpendicular, and she herself experiencing the sensation of being lifted up, and falling down or forward. Hunter, the anatomist, complained of like symptoms, felt as if suspended in the air, or that the room was running rapidly round, and his head flying from him with great velocity. "When he recovered," says Sir Everard Home, "his own feelings did not give him information respecting his centre of gravity, so that he was unable to balance his body and prevent himself from falling." Mr. Simpson explains the effects of intoxication on the same principle. "But for an innate, steady, and never-failing perception of equilibrium, animal movements would be only staggering and tumbling. The intoxicated soon lose a steady gait, fall down, see perpendiculars at right angles, believe the floor itself perpendicular, and grasp the ground to save themselves from falling off its surface; they feel lifted up, sinking down, and whirling round. Sickness would follow these sensations independent of the stimulus of the liquor to the stomach; and it is extremely probable that sea-sickness results from the inverted feelings occasioned by motion, which violates our habitual perception of equilibrium." Here Mr. Simpson supposes the effects of intoxication to arise from a want of sense of equilibrium, and sea-sickness from its over acuteness. He also quotes a case where the individual found himself sick whenever he watched the motion of the vessel he was in, but on fixing his eyes on the hills on shore became restored. But, in point of fact, the man's equilibrium was not steadier in the latter event than in the first; all the difference was, that he did not *see the motion of the ship*. If Weight produces the sense of equilibrium, how is it lost by intoxication? Liquor, which stimulates the organs, ought thus rather to have increased the sense of equilibrium. So, the head attacks of Miss S. L. and John Hunter, as they must necessarily have produced over action, not loss of action, ought to have made them balance themselves better than ever. Besides, how should the mere *absence* of an organ, make a man feel as if whirling, flying, sinking, or his head running away from him?

But if we suppose the organ hitherto called Weight, to be that of the Perception of Motion, the difficulty seems explained. All the elements of nature move or stand still by fixed laws, which experience gradually ascertains in all their relations, and accustoms the body to act in unison with them. But the organ which perceives motion, when inflamed, will, of course, perceive life and action in those objects which have none in nature,—or combined with Size, Form, Colour, and Locality, it may make landscapes, rooms, and figures for itself, and perceive all in a state of motion. Whether we use the terms resistance or motion, is a mere speculative question; it being an axiom in physics, that the power of motion of bodies is just in proportion to their quality of resistance, it being difficult to move a body just in the proportion to the difficulty of bringing it to a state of rest. This is in unison with Mr. Combe's remark, that when Weight is small, Constructiveness is manifested in the rearing only of still fabrics, not of working machinery. It also quadrates with the case of the individual whose sickness was the result of perceiving the *motion* of the vessel, which was cured by withdrawing his observation to the motionless hills. Infants, before they begin to walk, never get sick at sea; and persons with deficient Weight seem less liable to

that complaint, probably because, having an obtuse perception of motion, they are less sensible of the difference betwixt sea and land. So, infants can be rocked in cradles, or swung about in the arms, while such a process would instantly produce vomiting in persons accustomed to exercise their sense of motion. When we go ashore, after a long voyage, it is two or three days before the organ of motion ceases to feel the pitching of the ship. From Washington Irving's tale of "My Uncle," in which he conceives of all the furniture in the room dancing reels, we should expect to find in him this organ largely developed. Players of quoits, or archers, require large Size to perceive distance, and large Weight to judge of the velocity necessary. Some seamen estimate the ship's sailing-rate with singular accuracy. Galileo, whose organ of Weight was very large, discovered the earth's motion, and corrected our notions regarding that of the sun. Newton's genius might be said to be occupied in estimating velocities.

Still the subject is not free from difficulties. Nothing is more certain, than that the perception of motion is one of the most important elements of our knowledge of the external world, and yet that no organ has been assigned to it. As to aptitude in the management of our muscles, it seems certain, that practice and an original physical flexibility, combined with the desire to use and manage them dexterously or gracefully, must account for much that we have hitherto attributed to the endowment of a cerebral organ. We observe that Mr. Richard Edmondson has made some approach to the result at which we have arrived, in designating the function of the organ as that which not only perceives perpendicularity, but the *direction* of force, especially the gravitating *momentum* of bodies. Still there are circumstances which might induce us to pause in making a change of nomenclature. The cleverest and most ingenious mechanics often altogether fail in calculating the strength of the material which is employed in their engines or bridges. Grocers, by the eye, estimate the weight of commodities to a nicety; and some persons can guess the exact ponderosity of all their acquaintances. So, glass-blowers when desired to make a vessel of any form, can tell the exact weight of glass required; and the man employed to bring it from the pot, will take the quantity wanted to the precision of a drop. Some musicians and pianistes are said to owe the excellence of their touch, and the exactitude of their fingering, to this organ.

Further observation is necessary to enable us to pronounce any definite opinion upon this subject.

SECTION V.—*Organ XXVI. Colour.*

GALL observed in painters who were distinguished for colouring, that "the frontal part situated immediately above the middle of the eye, advanced into an arched prominence; the whole arch, and especially its external half, was directed upwards in such a manner, that the external half of the superciliary ridge was more raised than the internal." In painters who excel as colourists, he continues, "the superciliary ridge is strongly raised in the middle; in others this ridge has almost a horizontal direction; from the root of the nose to near the middle of the superior arch of the orbit, it is flattened or depressed; while in the first, this region becomes more and more prominent as it approaches the middle of the superciliary ridge. The organ of the sense of colours, is usually more developed in women than in men. Hence it happens, that the eyebrows form generally an arc of a circle in women."

That the perception of Colour is in the mind, and not in the eye, is proved by the fact, that in dreams or spectral illusions, we see colours when the eyes are shut. The eyes have no memory, but we recollect colours, and can match them from memory, detecting the resemblance or dissimilarity of a present hue with one we have seen before. As it is certain, that there are persons, who, though possessing an acute sense of hearing, yet cannot discern melody; so, men with piercing eyes, which see far and near, great and minute objects, may be incapable of distinguishing colours. This is not to be accounted for upon some theory relative to the pigment of the eye. "We have examined," says Sir J. F. W. Herschel, "with some attention, a very eminent optician, whose eyes (or rather eye, having lost the sight of one by accident) have this curious peculiarity (of not distinguishing colours), and have satisfied ourselves, contrary to the received opinions, that all the prismatic rays have

the power of exciting and affecting them with the sensation of light, and producing distinct vision; so that the defect arises from no insensibility of the retina to rays of any particular refrangibility, nor to any colouring matter in the humours of the eye preventing certain rays from reaching the retina (as has been ingeniously supposed), but from a defect in the sensorium by which it is rendered incapable of appreciating exactly those differences between rays on which their colour depends."

Dr. Spurzheim and Mr. Combe suppose, that perception is the lowest, and memory the highest state of each faculty. But memory is nothing but the recollection of perceptions. We cannot remember what was not perceived; and the accuracy of the recollection of an object depends on the vividness of our perception of it. If the memory of perceptions depend on the size of the organs of perception, then imperfection of memory indicates deficient size of development. If the vividness and clearness of the present perception of colour depend on the size of the organ of Colour, a small organ must indicate deficient perception. Thus, a feeble memory of tints indicates a small organ of Colour; a small organ argues imperfect perception; defective memory supposes defective perception, and the power of recollection is therefore in the ratio of vividness of perception. A person may perceive better than he remembers, but can never remember in a greater measure of vividness than he perceives. Mr. Combe's own illustrations prove this. 'Tucker, whose organ of Colour is small, "calls orange green, and green orange; red he considers as brown, and brown as red; blue silk looks to him like pink, and pink of a light blue colour; indigo is described as purple." Mr. Milne (brassfounder), his grandfather, brothers, and cousin, all possessed a small organ and deficient perception of Colour. Mr. Milne excels in distinguishing forms and proportions, is fond of shooting, and is an expert marksman. Yet he took red tape as a match for olive corduroy. Pink he calls blue, the colour of the sky; and in candle-light would pronounce it a dirty buff. Grass appears to him the colour of orange; crimson, blue in day-light, and bright red by gas-light. Dr. Nicol notices a naval officer who purchased red breeches to match with a blue uniform coat; and Mr. Harvey, a tailor at Plymouth, who clouted black small-clothes with a crimson patch. Dugald Stewart, Dalton, and Troughton, were equally deficient. The fundamental defect in all these cases is deficient perception. The individuals did not *see* the colours, because they did not distinguish them, and therefore they had no recollection of them; so true it is that we do not attend to that which we do not perceive clearly. Were perception the lowest degree of an organ, and memory the highest, it would be quite possible to find persons who could distinguish the finest shades, and fix rules of harmony, while they could not recollect green or blue; but this never occurs. A man remembers in the ratio of his vividness of perception; and that is conclusive proof, that memory is just perception engraven more or less deeply on the brain.

When the graphic organs are large, and Colour small, the artist betakes himself to drawing outline. Many cases of defect in this organ are recorded, which need not be here enumerated. Goethe observes, that the workmen in Mosaic, at Rome, find 750,000 shades of colours often too small for their purpose.

A bookseller in Augsburg, blind from birth, distinguished colours accurately, and arranged them in perfect harmony. Now, it is clear he could have no notion of colours; and therefore, harmony of colour cannot depend upon the perception of it, and indeed cannot be a law of mere tinting, but must possess some more generalised principle of congruity. If the man judged by the touch, this harmony must evidently be as much a law of tactile feeling as of sight. A blind man, at Stirling, distinguishes colours by the touch; and Derham mentions a similar case. Yet, the conception which the blind have of colours, must be an entire fallacy; and therefore it is impossible to suppose that the organ of colour is that which determines the laws of harmony. We believe the notions of the blind to be fairly represented by one of their number, who supposed scarlet to be like the sound of a trumpet. It may be true, that a certain general disposition of hues exists in nature, or that she has a tendency to display her tints in a peculiar series, and by a fixed order; and the eye of a colourist perceiving this disposition, may insensibly take it as a rule of harmony, in the same manner as the man possessed of large Size, derives his notions of proportion from having struck a general average. But in the beautiful flowers of the field, we have seen the laws of colour, as laid down by painters, often violated; and, after all, we suspect that nature is as good a judge of harmony as they are, and that therefore

their canons are little better than caprice or fancy. If nature indeed does not violate their statutes, then the inference is, that their rules are derived from observation, and not from any tendencies produced by the organ in question.

Upon the whole, we do not think that the organ of Colour should be considered as established.

CHAPTER XII.

ON THE THEORY OF BEAUTY.

WE have now arrived at the conclusion of the history and description of those organs which perceive the primary qualities of matter. But as there remains to be considered a question, not only of general psychological interest, and therefore not to be omitted in a dissertation on the powers of the human mind, but which bears direct reference to the inquiry as to the functions of those organs which have more recently formed the topic of our remarks, it will be proper here to submit some observations on the subject.

Mr. Combe, in treating of the organ of Form, propounds the doctrine, contained in the following quotation:—

“The metaphysicians do not admit a faculty of this kind. Mr. Jeffrey, in the article ‘Beauty,’ in the Supplement to the Encyclopædia Britannica, agrees with another author, whom he quotes, Mr. Knight, in maintaining that there are no forms that have any intrinsic beauty, or any power of pleasing or affecting us, except through their associations or affinities to mental affections, either as expressive of fitness or utility, or as types and symbols of certain moral or intellectual qualities, in which the sources of our interest are obvious. From these observations, one would suspect Mr. Jeffrey and Mr. Knight to be endowed with small organs of Form themselves, and that they have taken their own experience as that of mankind in general.” “I have met with persons in whom this organ is large, who declare that they enjoy a perceptible pleasure from the contemplation of mere form, altogether unconnected with ideas of utility and fitness, or of moral or intellectual associations; and that they can speak as intelligibly of elegant and inelegant, beautiful and ugly shapes, regarded merely as shapes, as of sweet and bitter, hard and soft.” Mr. Combe subsequently maintains, that there is an abstract beauty in colours; that because Lord Jeffrey pronounces this mere pedantry and jargon, he must have a deficient development of the organ of Colour, although he remembers and matches tints with singular exactness. Lord Jeffrey then claims an uncommon sensibility to the beauty of colours, spending “more time than most people in gazing on bright flowers and peacocks’ necks.” Painters inform Mr. Combe, “that the very circumstance of Mr. Jeffrey preferring bright flowers and peacocks’ necks, indicates that his mental power is weak, that it requires strong stimulus to excite it to action, and even when thus stimulated, is not capable of producing feelings of direct pleasure, or perceptions of harmony and discord, which, from their large organs, they decidedly enjoy.” In the very next page, (“System,” 3d Edition,) Mr. Combe, who had just found a passion for bright flowers to indicate a weak organ, mentions, that a person “in whom this organ was very large, was engrossed with a passion for *showy* flowers.” Let Mr. Combe reconcile these statements at his leisure; and when he has proved that a small organ demands a great stimulus, he may discover that a passion for gin is indicative of weak Alimentiveness, and that he who possesses the organ large can stand nothing beyond toast and water.

Mr. Combe’s proposition may be stated syllogistically:—Sensibility to the beauty of colours, is the result of the powerful action of a large organ of Colour; Lord Jeffrey maintains that this sensibility is the result of association; *ergo*, Lord Jeffrey has not a large organ of Colour!

The argument is about as logical as the following:—The mind is a congeries of faculties; Lord Jeffrey denies that the mind is a congeries of faculties; *ergo*, Lord Jeffrey’s mind is not a congeries of faculties.

Mr. Combe has not hesitated to confer upon the perceptive organs of Form, Size, Weight, and Colour, the functions of the intense *passions* of beauty, and *emotions* of grace and harmony. There is here little squeamishness about comprising the functions of the Sentiments and the Intellectual Faculties in one organ of *mere perception*. When Mr. Combe could suppose, that the exquisite feelings produced by gazing on the golden sun, the verdant earth, or the burnished sea, arose from the organs which *perceived* these objects; he might, with equal propriety, have traced to them, and not to Cautiousness, Benevolence, or Ideality, the fear, or the pity, or the sense of sublimity, which the forked lightning, or the havoc of war or pestilence, stir within us. But the proposition is so manifestly false, that its refutation requires small amount of argument. A perceptive faculty has no sense,—it does not feel, it has no emotions, it is not passionate. There is a sense of beauty,—we feel it, we have a passion for it; and that settles the whole question.

The word *beauty* is simply a name, denoting a general principle, in which a number of particulars agree. Green, red, blue, are individual qualities, agreeing in the possession of one feature, to which we give the name, Colour. A number of emotions resemble each other in this, that they are pleasant or agreeable, and these we classify under the general name of Sense of Beauty; the objects which excite it being called beautiful. Beauty is in the mind, then, not in matter; and all that the most sturdy supporters of the laws of beauty can contend for, is, that by a fixed and invariable law of mind, the objects which excite pleasure in one breast, do so in all; and that the harmonies of colour, tone, or form, are determinate, the sense of all mankind concurring in pleasing emotions on the presentation of certain objects. “The mineralogist, when he talks of the beauty of his crystals, has a distinct and intelligible feeling, to which the name of beauty is legitimately applied; and yet he connects no human emotions with the pyramids, and rhombs, and octagons which he contemplates in the spars.” Mr. Combe cites this case as an example of a sense of beauty in the organ of Form. Now, let us conceive the best draughtsman in Europe, with an enormous developement of Form, to be asked by Mr. Combe if he perceived great beauty in the pyramids, rhombs, and octagons of the spars? His answer would be, “I know nothing of the science to which they relate, and care nothing for them whatever.” The mineralogist would not be in the least disconcerted at this answer, because his admiration of his spars is the result of associating them with his scientific principles. His pleasure is not derived from the mere forms, or dependent on the forms at all. It arises from finding *minerals* taking such shapes. Cut a piece of wood into the most perfect rhomb, pyramid, or octagon in the world, preserving all the forms which are said to have given him so much delight, and he would care as little for them as a painter would for his crystals; or, draw them on paper, and he would entirely disregard them. His sense of their beauty had solely an intellectual and scientific origin, associating the external symbols of his studies with the harmonious arrangement and well defined laws of his natural philosophy. The nations that possess this sense of beauty most intensely, are just those which possess the highest intellect and most powerful sentiments. It is only when the most shadowy and filmy thoughts are caught by superior fervour of conception, definiteness of expression, and exactness of arrangement—when the mind begins to articulate its feelings, and to reason and force itself into fixed ideas about what is most evanescent and fanciful, that any thing like an abiding sense of the beautiful is felt, and reduced to orderly expression. Were there, in the world around us, fixed principles of harmony or beauty, our natural perceptions would detect them, without the aid of artificial education. But the very essence of our emotions of beauty is obviously acquired. There is no sound reason for that rule of proportion, whereby it is indispensable that the legs should be twice the length of the trunk, and the trunk twice the size of the head, except that such proportion is the general average. But had Nature made it otherwise, our minds, even constituted as they are at present, would have been as well pleased; and accordingly, although this rule of proportion does not hold in the case of the bear or the crocodile, we see nothing objectionable in the alteration. A statue in modern costume, is thought disgusting. Why? Because the habiliments of Greece or Rome are the prescribed garments; and the jacket and turban we admire so much on the Turk, would in our eyes only serve to make Apollo or Hampden ridiculous. That some forms and colours should meet with pretty general acceptance, is not wonderful. The sun or moon would soon

suggest an attachment to the circle, the crescent, or the arch; waving lines are types of the sea; the earth is clad in green; while the rainbow and the clouds, at sunset or sunrise, have mellow tints that all the world may love, except indeed the Laplander or Greenlander, who sigh for their hut in the icy waste, where the sun

“Shoots through the horizontal misty air,
Shorn of his beams.”

While we deny that the perceptive faculties can produce emotions of beauty, we are inclined to suspect that there are some laws of natural association betwixt each of the passions, and the love of, and aversion for certain forms, shapes, and colours. Amativeness admires the soft, voluptuous beauty; Self-Esteem, the maid in whose dilated nostril is “beautiful disdain;” Cautiousness is enamoured of pensive timidity; Benevolence loves a countenance of benignity; while Secretiveness and Hope, kneeling at the feet of Thalia, gaze on her

“Quips and cranks and wanton wiles,
Nods and becks and wreathed smiles.”

Thus the sense of beauty changes with the hues of the passions, and is always regulated by the predominant; and thus a painter, like an actor, can only succeed in giving adequate expression, by being possessed in power with the passion which the countenance he undertakes to paint betrays. The basis of all is Amativeness. Before puberty, there is no sense of human beauty; and in extreme old age it dies away. When this organ is moderately developed, ugliness, or deformity, as well as symmetry, will be indifferent. We believe all great painters and sculptors to possess large Amativeness,—and we think their biography will prove this position satisfactorily.

The passions seem to have their peculiar shades and colours. The bull's Destructiveness is roused by scarlet. Hope is fond of light, and glaring colours. Cautiousness affects sober and subdued tints, and when much excited seems to shun the light. When joined to Veneration, it is fond of sombre and gloomy shading; and when to Wonder, it seeks a lurid glare. We talk of a person of a gloomy disposition, without metaphor; and melancholy has actually built up its windows, and lived in the dark; while the contemplative, like Burns, love to walk in bleak winter nights, through avenues of trees, hearing the winds moaning through the branches. There are some sounds which make the mind solemn, and others merry; and black colours lead to grief. These we think universal associations betwixt the passions, and the elements of the external world. Now, if this be so, it is not wonderful that we should hear of harmonies of sound or of colour. There are also harmonies of emotion. When a man is in deep grief, mirth or jocularity disgust him, because they do not harmonise with his existing mood. If, then, we suppose sorrow to be fond of dark shades, and joy to affect bright hues, we can be at no loss to perceive, that by associating colours with passions, the sudden juxta-position of deep shades and bright tints will be as disagreeable, as joy and grief excited at the same moment.

“Ye woods and wilds, whose melancholy gloom
Accords with my soul's sadness.”

“Horrors now are not displeasing to me:
I like this rocking of the battlements!
Rage on, ye winds, waves roll, and thunders roar;
Ye bear a just resemblance to my fortune,
And suit the gloomy habit of my soul!”

Allegro.

‘To hear the lark begin his flight,
And singing, startle the dull night,
From his watch-tower in the skies,
Till the dappled morn doth rise;
While the cock with lively din,
Scatters the rear of darkness thin;
Oft list’ning how the hounds and horn,
Cheerly rouse the slum’ring morn;
Sometimes walking not unseen,
By hedgerow-elms and hillocks green,
Right against the eastern gate,
Where the great sun begins his state,
Robed in flames and amber light,
The clouds in richest liveries dight.”

Penseroso.

‘Thus night oft see me in thy pale career,
Till civil-suited morn appear;
Not trick’d, and frownc’d as she was wont
With the Attic boy to hunt,
But ‘kerchief’d in a comely cloud,
While rocking winds are piping loud;
And when the sun begins to fling
His flaming beams, me, goddess! bring
To arched walks of twilight groves,
And shadows brown, that Sylvan loves—
Of pine or monumental oak,
Where the rude axe, with heavy stroke,
Was never heard the nymphs to daunt,
Or fright them from their hollow haunt,
Hide me from day’s garish eye!”

We shall only here further observe, that it is not wonderful that there should be recognised rules of proportion, figure, and harmony of colour or of tone, when we consider the tendency of the mind to associate with the objects of its attention, relations which only exist in the intellect itself. How long were the Unities reckoned indispensable to the drama, as rules based on the unalterable laws of human conception! How long did Aristotle and Longinus and Quintilian manage to impose upon the world canons of taste which are now universally exploded! How often do we find Germany reducing mere whims to rules, and erecting a science out of nothing! How do we find the Romanticists and Classicists in composition, scouting each other's pretensions, and each claiming for themselves all that existed of truth and passion in human nature! And how do we find, at home, house-painting vindicated as a science, and the laws of harmonious colouring as confidently supported, in their pretensions to infallibility, as the Newtonian theory of the universe!

CHAPTER XIII.

FACULTIES OF RELATIVE PERCEPTION.

SECTION I.—*Organ XXVII. Locality.*

THE lower animals have a singular precision in the perception of geographical direction, or the points of the compass. The swallow flies eighteen hundred miles over sea, far and for days out of sight of land, yet it never mistakes the north for the south, but year after year returns to its former nest. The same is the case with all birds of passage, which, when insect food becomes scarce in one climate, fly to another where at certain seasons it is plentiful. That this is the motive for these migrations, is proved by the observations of many travellers. The present Lord President of the Court of Session in Scotland, remembers, about forty years ago, of visiting the Carron Iron-works in the depth of a severe winter. There was a pond in the immediate neighbourhood of the immense furnaces of the establishment, and the temperature was mild, and even warm, over and around it. In consequence of this, it swarmed with insects even at that season, and a number of swallows were busily flying over and around the pond seizing their prey. When his Lordship remarked this circumstance to the men, they said, "We never want swallows here." But to return: Dogs have been taken in close carriages over sea thousands of miles, and have found their way by a totally different route to their former habitation. Pigeons carried from England to France in a bag, return to their home the instant they are set free. The falcon of Iceland carried south to an enormous distance, whenever let loose, flies sheer up into the air, and sails on the wind due north. An ass thrown overboard, swam ashore, landed on a strange and distant coast, and found its way, through many difficulties, to its home in Gibraltar. Holman, the blind traveller, knew all the intricacies of London better than his servant did. Great astronomers, navigators, and geographers, as Newton, Tycho Brahe, Kepler, Galileo, Columbus, seemed to have an intense perception of direction. The latter had a settled conviction of the latitude in which he would find new continents. We are inclined, therefore, to call this power by the name of the Perception of Polarity, if it may be so termed. Sir George Mackenzie assigns to the organ of Locality, the function of the perception of the relation of position; but the acts of animals and blind persons, the former of which return by a different route to the home from which they were taken hoodwinked, and the latter of whom have no eyes to see the relative position of places, convince us that they are guided simply by a clear conception of direction.

The perception of relative position is the result of the action of more than one organ, and is modified by several varieties of combination. Locality may give the direction, and Size the distance. Form, Language, and Individuality, may see the shapes of houses, remember the names of streets, and connect the order of the series of geographical phenomena. But, of course, the perception of direction is the in-

dispensable organ. Great coal-viewers, uniformly possess large Locality; and when at the very bottom of a coal-pit, they have an acute sense of the dip, or inclination, and direction of all the minerals, remembering the points of the compass as if by intuition.

Mr. Combe supposes that this organ produces a talent for chess-playing; and he has found it large in all great geometers. It is also found large in good landscape painters; and enables persons to take easily the *coup d'œil* of any country they are passing through. Sir Walter Scott was so accurate in his descriptions of scenery, as to be said to save the painter the trouble of invention. In him this organ was large, but also accompanied with a powerful endowment of Individuality and other perceptive faculties. We confess that we do not see the necessity for this principle in the conception of scenery. Form, Size, Colour, and Weight, acting with Individuality, seem enough to furnish us with the picture of the landscape, as well as to give us the conception of a countenance. Nature has made no relation of place, but has presented us with a picture which, to our mind, Wonder and Form are competent to realise. It is our own minds which have created an artificial relation, in order that objects may be better individualised in our thoughts. Still the subject is one of very difficult analysis.

Drs. Gall and Spurzheim supposed that Locality produced the love of travelling; but we have already assigned sufficient reasons for objecting to the ascription of emotions or passions to a perceptive organ. Besides, if its function be the perception of *relative position*, it would be infinitely more gratified in threading the intricacies of London or Paris, than in a voyage round the world, in which almost all time is occupied on the wide ocean, where no relations of position are to be found. Yet, great travellers care nothing for crowded cities; nay, we must be permitted to suspect, that Mungo Park, or Vasco de Gamba, would, with all their Locality, manifest much less proficiency in the perception of the relation of position in the Metropolis, than the twopenny postman, or the porters.

Gall describes this organ as being situated a little above the eyes, and on the two sides of the organ of Individuality; being two large prominences commencing near each side of the nose and going obliquely upwards and outwards, almost as high as the middle of the forehead. Under Individuality, it will be found largely developed in the head of Pöpe Martin V. Vimont remarked, that the asses in Paris found, through the most intricate streets and lanes of the city, their own stable, with unerring precision. In Manchester, where the milk is carried on an ass's back, in pitchers, we observed that the animal stopped with perfect accuracy, and entirely of itself, at each customer's door—going through many streets and lanes, and the milkman lagging behind. In China, an enormous number of the inhabitants live in flat boats upon the rivers: they have, belonging to each boat, vast numbers of ducks, which swim all day long on the water, the flocks being mingled in tens of thousands; yet, at the call of the proprietors, amidst this seeming inextricable confusion, each finds its own boat with perfect precision, and without any difficulty whatever.

SECTION II.—Organ XXVIII. Number.

SEVERAL nations have laid claim to the *invention*, as historians have termed it, of Arithmetic; and others have commemorated the names of such of their countrymen as have introduced its practical application from foreign sources. Savages are possessed of almost no knowledge of numeration; and some tribes of negroes are ignorant of the simplest relations of figures. Humboldt mentions, that the Chaymas of Spanish America have a total incapacity for figures, even the most intelligent with difficulty getting so far as to count up to fifty. In civilised society, many persons of superior education are not able to attain any proficiency in arithmetic, while many mere children become prodigies in the science of numbers. Devaux, at seven, made all the calculations for the merchants on market-day. A boy of St. Poelton was, at thirteen, exhibited at Vienna as a wonder of arithmetical genius. Mantelli, and Vega, equally attracted Gall's attention in this respect. Bidder, and Colburn, at a very early age electrified all the most expert accountants by their astonishing powers of calculation; and Humboldt's brother was equally distinguished. These persons displayed a total inaptitude for geometry, or any part of mathematics inde-

pendent upon figures. In all these cases, Dr. Gall found the external part of the orbital plate "depressed in such a manner, that the superior orbital arch is no longer regular, except in its internal part, and its external half represents a straight line, which descends obliquely. Hence it follows, that the external part of the eyelid is depressed, and conceals the corresponding part of the eye." Mr. Combe states, that "the organ, when large, fills up the head above and outside of the external angle of the eye, a very little below the point called the external angular process of the frontal bone."

The true function of this organ, it seems by no means easy to discover. So far as our observation goes, we have observed, that the questions solved by these arithmetical sphynxes, were extremely simple as to their terms, although extremely voluminous in the number of their figures. We carefully examined the heads of all the mental calculators, and found Form well developed, Eventuality considerable, and Wit above average,—in Bidder, indeed, enormous. We should expect, therefore, that the latter would best understand complicated questions. We believe this organ to be simply a *perception of units*, which, when developed to a high extent, will produce a vivid conception of single numbers. This will readily give a perception of the combination of simple units, and these combinations will all be remembered accurately *as facts* and numeral phenomena. This recollection of all the combinations of numbers presented to the individual, will of course dispense with an enormous amount of analytical labour; for it is clear, that the man who remembers the result of the division or multiplication of one set of figures by another, will calculate much more rapidly than he who, although he has multiplied or divided the same figures a thousand times, is still necessitated to calculate them over again; this, of course, can be done mentally much more rapidly than by a slate, if Form, and Locality, or Order be well developed; and accordingly, the mental calculators state that they see the figures before their eyes as distinctly as if they were on the slate. Where there is only the organ of Number, there will be a capacity for only the simplest orders of calculation; and we should expect, if Eventuality be small, that the combinations of units will not be easily remembered. Wit we should expect to operate in the way of perceiving precisely the conditions of intricate questions. Still, the matter is involved in much doubt, and we place little reliance on the accuracy of the observations hitherto made.

The lower animals are said to count to the extent of three, five, and according to some, the length of nine. This seems by no means satisfactorily authenticated, and we therefore pronounce no opinion on the subject.

SECTION III.—Organ XXIX. Order.

THE organ of Order is situated at the external angle of the eye, and its size is indicated by the projection of the eyebrow at this part outward and laterally, and by a general roundness and fulness of the brain at that part. The projection of mere bone at this point is more angular, and may be detected from its want of roundness.

We suspect that Order, in the sense generally understood, is a complex feeling arising from the operation of several faculties; but there also appears to be a perception of objects in the relation of their physical uniformity, which may be considered as more exclusively the attribute of the organ in question. "There are individuals," says Spurzheim, "even children, who like to see every piece of furniture, at table every dish, and in their business every article, in its place—who are displeased and unhappy when things are in disorder around them. The Sauvage de l'Aveyron, at Paris, though almost an idiot, could not bear to see a chair or any other article out of its place. As soon as any thing was disarranged, he went of his own accord and put it right." Now, what is here meant by an article being out of its place? Experience informs us of certain physical arrangements which are either the most convenient for our use, most easy for practice, or classified in the best method for retention in the memory. Order, in this case, is simply another term for utility or fitness, and consequently is a complex perception made up of the results of several faculties. This peculiar modification of the perception of Order seems to be the

same in result with what, in the works of Leibnitz, is styled the Sufficient Reason; and means, that where order, regularity, or arrangement are observed, there is excited an instinctive sense of design, which produces the insensible conviction that human thought has prompted human hands in the order of physical conformation, from the detection of which rational intelligence, we instantly feel sympathy with the mind which produced it. But where there is no arrangement, there appears no design: objects are presented in certain places without any sufficient reason, and seem thus to exist from whim or folly. The eye is offended from the *extempore* appearance of objects, as if they had been placed off-hand, and without study or premeditation. But the sense of disorder may be removed by the detection of design. "The beauty," says Dugald Stewart, "of a winding approach to a house, when the easy deviations from the straight line are all accounted for by the shape of the ground, or by the position of trees, is universally acknowledged; but what more ridiculous than a road meandering through a plain perfectly level and open. In this last case, I am inclined to refer the disagreeable effect to the principle of the *sufficient reason* already mentioned. The slightest apology for a sweep, satisfies the taste at once. It is enough that the designer has the appearance of humouring nature, and not of indulging his own caprice." The utmost irregularity in the disposition of the great elements of nature, does not strike the eye of the most orderly and finical man as at all disagreeable. Indeed, nothing is felt by the most fastidious classifier as being an eyesore, from its confused aspect, except that which by the exertion of human power could have been disposed otherwise. Caprice, or unsettled purpose, as indicated by a total absence of the recognition of any principle of design, is what truly produces dissatisfaction. Whenever thought is implied, as in arrangement, by symmetry, length, uniformity of colour, or any other symptom of a settled plan, the sense of confusion is not felt. This sense of order depends for its direction upon the other faculties. If a man possess small Form, arrangement into classes of shapes will not be desired. Large Size will be fastidious about equalities of dimension, horizontal and perpendicular lines, the selection of centres, &c.; while small Colour will see no offence in the most heterogeneous mixture of hues. This compound principle, which may be termed the Order of sufficient reason, is founded upon resemblances, and may probably be influenced by Comparison. But Dr. Spurzheim also speaks of persons who like to see every thing in *its* place; which suggests the idea of definite situation. Children manifest early a desire to put every thing in its proper place; which means, that they wish no change of position or condition to be produced on any object once seen in a particular place or specific state. The Sauvage de l'Aveyron, as noticed above, whenever he saw a chair out of its place, put it right. All that this would argue, would be a vivid perception of the condition of things. It is not said whether the savage, having originally seen objects in confusion, set them in their former disorder, when they were arranged; but this should have been the result, if his tendency was simply to put objects in their former place. This phenomenon would be the result of a passion for uniformity of condition, probably Concentrativeness,—joined with Order, which perceives condition.

These are mere conjectures thrown out rather to suggest further inquiry, than from confidence in their accuracy, and are only intended to expose the fallacy of the existing analysis of the function of the organ.

It is quite certain that Order is found large in the heads of finical, particular, fidgety men, who are extremely sensitive in matters of arrangement; and also in those of methodical or formal persons—those animated-style books, who do all by set clauses, act by a sort of social charter, and think as if ideas were statute-books, or the intellect a collection of moral canons divided by chapters, subdivided by sections, labelled, indexed, and supplied with a table of contents. These men are peripatetic printed schedules, in whose brain only a few blanks are left to fill up with the circumstances of each particular occasion. They are in general fond of proverbs; and probably "Poor Richard" owed its origin to Franklin's large development of this organ. Jeremy Bentham's works may be called truly the philosophy of system. In him, also, Order was powerfully developed. Men of this turn make the best conveyancers; every paper, duly labelled, will be in its proper drawer; the ledger will be kept as trimly as a lady's album; and the sermon will have a dozen heads at least. Wigram's Treatise on Ethics makes philosophical divisions, by means of varieties of type. One argument is in Small Pica, another in Brevier,

and both are answered in *Bourgeois*; his minor statements are in *Pearl*, and his important statements in *Capitals*. He advances his major proposition in yellow colours, his minor in red, and makes his conclusions in blue; he insinuates in *Italics*, makes antitheses by double columns, and sums up an argument by circumflexes. Order is also large in botanists, mineralogists, and classifiers, and probably in all men whose works or speeches are overlaid with arrangement.

Of course, those men who have small Order are confused, dirty, slovenly, and irregular. This kind of character is so common, that description is unnecessary.

The lower animals are certainly cleanly and tidy in their habits. They also manifest, in the precise arrangement of their nests or dens, some taste for, and perception of, order.

SECTION IV.—*Organ XXX. Eventuality.*

THIS organ is situated exactly in the centre of the forehead, and, when well developed, gives it a round and full appearance. It is separated from Individuality by the organ of Locality; bounded on its sides by Time, and above by Comparison.

"The function of this faculty," observes Mr. Combe, "is to take cognizance of changes, events, or active phenomena, indicated by active verbs. In such expressions as the rock *falls*, the horse *gallops*, the battle is *fought*, the substantive springs from Individuality, and the verb from Eventuality. It prompts to investigate by experiment; while Individuality leads to observation of existing things. Individuality gives the tendency to personify abstract ideas, such as Ignorance or Wisdom; and Eventuality to represent them as acting. In a work written by an author with whom I was acquainted, and in whom both of these organs were large, Ignorance and Common Sense were represented as personages, who addressed the people, excited them to action, and themselves performed a variety of parts; Ignorance 'stole a march upon Common Sense,' who, by dexterous expedients, extricated himself from the difficulty. An author in whom Individuality is large, and Eventuality small, will treat of his subjects by description chiefly; and one in whom Eventuality is large, and Individuality small, will narrate actions, but deal little in physical description."

"It seems to me," observes Spurzheim, "that this faculty *recognises the activity of every other*, whether external or internal, and acts in its turn upon all of them. It desires to know every thing by experience, and consequently excites all the other organs to activity; it would hear, see, smell, taste, and touch; is fond of general instruction, and inclines to the pursuit of practical knowledge, and is often styled *good sense* in our proceedings. It is essential to editors, secretaries, historians, and teachers. By knowing the functions of the other powers, this faculty and Individuality contribute essentially to the unity of consciousness, and to the recognition of the entity *myself* in philosophy. Eventuality seems to perceive the impressions which are the immediate functions of the external senses; to change these into *notions, conceptions, or ideas*; and to be essential to attention in general. Its sphere of activity is very great, and expressed by the *verbs* in their infinitive mood. Every philosophic system has taken account of some operations of this faculty."

We think it will not be disputed, that in this description there is no great clearness of thought; and that neither author has succeeded in giving the reader any very intelligible or definite idea of their meaning, or of the function of the organ they describe. We do not expect to free the subject from the difficulties which surround it; and shall throw out our suggestions, in the expectation of leading the way in future inquiry, rather than in the anticipation of satisfying our own doubts or those of others. In the meantime, we are happy to acknowledge our impression, that Dr. Spurzheim has advanced far in the elucidation of the function of the organ; and that, had his metaphysical acumen been equal to the precision of his observation, he would probably have entirely unveiled the mysteries of this cerebral convulsion.

We have already treated of those organs which perceive simple existences, and those relations which distinguish individuals from a class. We now proceed to the consideration of those faculties which perceive the relations of objects to each other, —analogous to the principles of Suggestion noticed by metaphysicians, particularly

by Dr. Brown. Objects or ideas are related by the perception of resemblance, by that of succession or sequence, by situation or place, and by contiguity or co-existence in point of time, either in fact, or with reference to our consciousness. The organs which perceive the important relations of resemblance and sequence, are Comparison and Causality, placed at the top of the forehead, adjoining Eventuality above; those which perceive contiguity of place and time, are Locality and Time, touching it at the sides and base; and those organs which perceive and connect the simple perceptions of external objects, are placed immediately below the connecting organ, Individuality, being in the centre of the base of the forehead, immediately below Eventuality. Now, it appears to us, that Eventuality is the nucleus of all conception or thought, both in a cerebral and metaphysical sense. It is in the exact centre of all the Intellectual Faculties, and appears to us to perform the same office to the whole organs of the forehead, which Individuality administers to the organs of Simple Perception. As Individuality connects Simple Perceptions, Eventuality appears to us to connect the various orders of Relative Perception; or, in other words, we believe it to be *par excellence* the organ of Association, or that faculty which perceives what may be called complex ideas. The perception, either of our own thoughts, or of those of others, is of course the result of a very different process from that of the perception of objects; and that of the phenomena of passion, affection, sentiment, and emotion, evidently embraces a wide field of vision, to which no cerebral overseer has yet received his appointment.

We have uniformly observed this organ largest in those authors who were most felicitous, and chiefly occupied in describing the phenomena of thought, feeling, and conception. Dr. Thomas Brown, as well as Le Sage, Defoe, and Sir Walter Scott, who are chiefly remarkable for their precise description of the train of thought, and the phenomena of feeling, possessed a considerable development of it. But, above all writers, Coleridge had a mind the most subtle, and endowed with the most astonishing power of taking his own mind, as it were, out of himself, handling it as if it were some chemical compound to be analysed, and placing it, like some curious insect, into a metaphysical microscope, where the whole machinery of its action might be detected with the most exaggerated palpability. The organ of Eventuality in his head is very large indeed. It seems also considerable in the head of Rousseau, the most eloquent of the historians of thought and feeling; in all persons remarkable for the strength of the associating principle, who *think aloud*, and to whom every object, word, or incident, suggests a train of circumstances connected with it at some former period, in a different circle of perceptions. By the action of a number of the organs of Intellect in concert, a compound, or general idea is formed, and this idea is perceived by the organ of Eventuality, which may be called the individuality of thought, or that principle whereby the perceptions are combined into one integral conception. Above all things, it is important to the orator or the *littérateur*. It is the organ by which every thought, imparted to him by conversation, or by book, is perceived as an idea, and by which the trains of his own cogitation are observed, impressed, and reproduced. It is the faculty by which the co-existence of certain feelings, or ideas, with certain times, and particular places, is perceived; by which days are associated with friendships, and the Hawthorn with the tale of love that was told beneath its branches. Eventuality is eminently the suggesting organ—the principle that perceives the train in which ideas pass through the mind, and by which the whole series of circumstances, or thoughts, which occurred on any particular occasion, are recalled by the suggestion of any one. With the organ of Time large, thoughts are connected with days; and with powerful Locality, are allied to places. These infuse a vivid reality into all our feelings, and “give to airy nothing a local habitation and a name.” Eventuality is a term chosen by Dr. Spurzheim for this organ, because it is found large in all persons who possess a powerful historical memory, or a vivid recollection of changes in the condition of objects. But it is not to be forgotten, that the words *condition*, or *change*, are things not inherent in external nature, but mere intellectual perceptions of the connection of objects in various states, and relative conditions. When we talk of a horse falling, all that we *perceive* externally, is the horse on its feet, as the antecedent; and the horse on its knees, as the consequent; we observe, in short, two separate states or conditions. It is the mind which connects the standing and falling with the same animal, associating them by succession of time and change of

place. Hence, events are only a series of states, combined by thought into one idea, and associated together by Time and Locality. An event is a relation—an intellectual reflection, as it were, upon external phenomena; and the perception of this reflection, or of the compound action of organs, into one idea, seems to us the province of Eventuality.

This organ may emphatically be called the storehouse of thought. It is essential to a great poet, a great moral writer, a great metaphysician. It enregisters all our conceptions, remembers the trains of other men's thoughts, combines the links of our own ratiocination; and, by a system of mental mnemonics, associates all our feelings and perceptions, and forms the great element of our suggestive powers. Hence, the man who possesses a large endowment is always apt, ready, and definite. Every idea he has conceived, is indelibly impressed upon his mind; and his flood of thought, suggested by a single reflection or observation, is never-ceasing. His mind is matured upon all subjects, by his previous cogitation having been always remembered, or rather perceived and impressed upon his brain; and hence, when he speaks, his thinking is copious and definite, and he talks as "if it were out of a printed book." When Coleridge said to Lamb, "Did you ever hear me preach?" the answer was, "I never heard you do any thing else." In truth, Coleridge, from his enormous Eventuality, would keep a whole company of the greatest spirits of England mutely listening to his continued address, upon any topic, for five or six hours; and all would confess that the harangue appeared as if it had been a splendid work repeated off by heart.

It is probably to this organ, that much of the readiness of mind for which some men are distinguished, is to be attributed. It is essential to the professed wit, and the expert story-teller, who introduces his anecdotes, not by the head and shoulders, but as illustrative of the point at issue in the conversation. It is the secret of the success of ready men, who are felicitous in repartee, and is large in the bust of Sheridan. It must form an important element in that presence of mind which presents to a man the whole stores of his intellect at once; and probably gave to Pitt that calm reliance on his own resources, which arose from the ease with which he rapidly considered and treated the whole bearings of any subject, or the contingencies of any sudden emergency.* It is essential to the punster, and will be found considerable in all men who are happy and copious in quotation. It is large in Miss Martineau, Miss Mitford, and Lady Morgan. The cant and current phrases of the day, which overlay the leading articles of so many political writers, are picked up and reproduced by Eventuality; the organ which, in its broadest sense, as we before observed, renders the mind suggestive.

We are quite aware, that in these observations, we have rather described what Eventuality *does*, than what it *is*. To do the latter satisfactorily, would require a more careful survey, and minute investigation of the function of the Intellectual Faculties, than the light we yet possess enables us to institute, or the design of this work will permit. It is a subject which, however, commands an anxious interest, and a large share of our attention. We trust, that what we have said will excite a sufficient degree of attention to induce other students of metaphysics to labour in the field in which we have endeavoured to break the ground.

SECTION V.—Organ XXXI. Time.

THE organ of Time is placed exactly upon each side of Eventuality, and the lower part of its convolutions rest upon Locality.

There are individuals who possess a precise and intuitive perception of intervals of

* Mr. Combe has represented Eventuality as "large" in the head of Pitt; and it is singular to observe, in the account given of that statesman by the late William Wilberforce, Esq. M. P., how completely it coincides with our definition of the function of the organ. "He was," says he, "the wittiest man I ever knew; and, what was quite peculiar to himself, had at all times his wit under entire control. Others appeared struck by the unwonted association of brilliant images; but every possible combination of ideas seemed always present to his mind, and he could at once produce whatever he desired." "Many professed wits were present, but Pitt was the most amusing of the party, and the readiest and most apt in the required allusions." This last acquisition was probably produced by his very large Comparison, which perceived at a glance the resemblance betwixt states, which lends the peculiar aptness to quotation.

time; telling, with singular exactness, the lapses of minutes and hours. A deaf man, named Chevalley, is reported by M. Chavannes, to have "engaged to indicate to the crowd around him, the passing of a quarter of an hour, or as many minutes and seconds as any one chose, and that during a conversation the most diversified with those standing by; and farther, to indicate by the voice, the moment when the hand passed over the quarters, minutes, or half-minutes, or any other subdivision previously stipulated, during the whole course of the experiment. This he did without mistake, notwithstanding the exertions of those around him, to distract his attention, and clapped his hands at the conclusion of the time fixed." We are acquainted with a gentleman, in whom the organ of Time is very large. His developement was sent to Mr. Simpson, who put the query, "Does he not, when asked what o'clock it is, invariably inform the querist, before referring to his watch?" It is certainly singular that we had often remarked this habit of our friend, who told us the time invariably to within a very few minutes. Some persons with a very defective ear for music, dance in excellent time; while it is quite as common to find persons sing or play in most accurate tune, who are quite incapable of keeping time. The deaf and dumb also dance in accurate time. A patient of Dr. Hoppe, "complained of pain, and a strong sense of burning, in a line across the forehead," and laid "the point of his finger most exactly upon one of the organs of Time, drawing it across the forehead to the other organ of Time." She stated, without being particularly questioned, that though she was perfectly conscious of herself and of every thing around her, she had no conception of time; so that sometimes an exceedingly long period, and at other times but a few moments, seemed to her to have elapsed since she fell into her present state."

"The lower animals," observes Mr. Combe, "seem to be endowed with the power of perceiving and appreciating intervals of time. Mr. Southey, in his *Omni-ana*, instances two dogs, who had acquired such a knowledge of time, as enabled them to count the days of the week. He says, "My grandfather had one which trudged two miles every Saturday, to cater for himself in the shambles. I know another more extraordinary and well authenticated example. A dog which had belonged to an Irishman, and was sold by him in England, would never touch a morsel of food upon Friday." Mr. Combe then quotes similar examples in horses. But these have nothing to do with the appreciation of intervals of time. The animals did not make an estimate in length of time, but in *numbers* of days; very easily discriminated and counted by the recurrence of the season of the night, at the close of each day. We have often thought that horses were quite aware of Sunday; and we have remarked, that if regularly employed in work from six to six, they manifested evident symptoms of dissatisfaction if worked beyond these hours.

It has been felt by many careful and anxious metaphysicians, that

"To expostulate

Why day is day, night night, and time is time,—

Were nothing but to waste night, day, and time."

Yet it is clearly impossible, until some particulars regarding this momentous problem be solved, to ascertain the proper function of the faculty now under consideration. It is very certain, that time is not any thing appreciable by the senses; nor is it any thing that can be perceived. Whatever it is, therefore, it is not without but within us—it is not material, but spiritual—it is not an external entity, but solely a mental creation, or a *mode* in which the mind considers what is presented to it. This mode is probably a perception of the relation which events or things bear to each other in their precedence of observation by our own intellect, and their relation also in point of co-existence, with certain seasons of the day, week, or year. The measure of time, like that of space, does not inhere in the external world, but is a sort of labour that our minds put upon our lives and the existence of nature—things that are neither seen nor handled, but rather the vacant intervals betwixt our perceptions or ideas. The conceptions of an insect are, that a cabbage is a universe; those of the ephemeron, that a day is an eternity, and an hour a lifetime. Their ideas of space and time, are bounded by the extent of their vision and corporeal dimensions, and by the length of their own lives. The calculators of duration, therefore, depend for their precision upon the relations of our other ideas. If we do not count certain intervals, we have no notion of time. If these intervals do not bear some exact rhythmical proportion to each other, we lose all conceptions of time; for it is certain, that

all our power consists simply in calculating intervals, so as to divide them into equal parts. That the pulse in some measure assists us, we are strongly inclined to suppose. The height of the sun, the stated intervals of business, must also be included in the catalogue of appliances. The dancer must either have the time marked for him by the fiddlers, or he must count it for himself; and this method of calculation, it will be found, is merely a vivid recollection of past measurements of musical intervals. The dancer makes mental imitations of a pendulum, and he always conceives either of pulsations or of measured strokes. Of abstract duration, we have certainly no *conception*. When we think of the past, we do not at all imagine a period of time as elapsed. We conceive of a road (space) that we have walked over, and now turn to look back upon; and when we talk of the future, we insensibly suppose it on before us, while the past is behind our back. We think of our former *condition*, our physical height and experience, our relations with the world without us, our friends, our father, the spirits of the age, and our feelings. Our notions of the interval of time that has passed since, are concentrated in the change of our condition, faculties, and feelings, the difference of mind with which we now contemplate acts that happened long ago, the change of our hopes and fears, the dimness of our recollection, the death of friends who once loved us, political revolutions, and the no less singular revolution that distance of time has caused in our own thoughts. "The origin of the notion of time," says Mr. Combe, "has greatly puzzled the metaphysicians. Lord Kames says, that we measure it by the number of ideas which pass in the mind; but experience contradicts this assertion, for time never appears so short as when ideas are most numerous, and pass most rapidly through the mind." Now, we do not in this concur with Mr. Combe. His very statement involves the admission, that the number of our ideas is greatly instrumental in establishing our ideas of time, for he grants that time appears short when ideas are numerous. When a man has been vividly impressed with any event of which he has been a witness, or in the production of which he was a chief actor, he at the interval of many years exclaims, "It appears to me as if it had occurred only yesterday." The more new ideas a man receives into his mind, the more old ideas he is likely to put out of it, or to render dim and illegible. Faintness of recollection constitutes a very large portion of his conceptions of the lapse of time. If every circumstance or thought that he ever witnessed or experienced, were equally present to his mind, with the incident of the moment in which he exists, and had they never waxed fainter in their impressions, we very much question whether he would have any idea of time whatever. Eternity is unchangeable. It is without beginning or ending. It is a ring, every part of which is equi-distant from the centre. Time is as young, as fresh, and full of hope as ever it was, because, in truth, every *punctum temporis* is but the same point. But we are older—we are changed—and memory is dim, and affections are altered; and while we think the trees, and hedgerows, and hills are galloping with rapid fury past us, we forget that we are whirled along in the chariot of our own conceptions—the world of space and time all the while having been standing stock still. Hence the absurdity of the notion, that a recollection of dates, and a talent for chronology, have any thing whatever to do with the organ of Time. To remember that Adam lived six thousand years ago, is not to have a perception of time; for the chronologer has surely not lived six thousand years, and could not have remembered the lapse of them. To recollect that the year 1688, was the epoch of the Revolution, is not to have any idea of its relation to time. All that in either case is remembered, is, that we have read in a book, or heard people say, that a certain fact occurred in a certain year; or, in other words, that we have connected the words Prince of Orange with four letters—one, six, eight, eight—the result of Eventuality, Individuality, and probably Order. That this organ should make us connect occurrences, in *our own experience*, with the hours or seasons in which they happened, is not unlikely; because, if our perception of intervals of time or of thought be very strong, it always induces us to take notice of their co-existence with other impressions.

This organ is supposed to be essential to the production of proper rhythm in poetical composition, or the just balancing of prose sentences. Some authors, as Johnson, for example, write in the most measured cadence; and there are many who stuff their sentences with superfluous words, simply that they may sound in set measures, rounding their periods, as if words, and not ideas, were the sole aim and end

of speech or writing. Combined with large Self-Esteem, this organ encumbers every sentence with euphonous magniloquence. An advocate, of this high-toned address, commenced his speech about a *blind fiddler* thus: "My lord, my client is an itinerant performer on the violin, who has been unfortunately deprived of the precious gift of sight." Being of a presence in which there was much of mock majesty, he was often mobbed by the boys of the town, upon which occasion he would thus address them: "Hence, ye base plebeians! or, by the summits of my digits, I will scatter you into such an immensity of space, that it will puzzle omniscience to find ye out, and omnipotence to put ye together." Complaining to Henry Erskine of having broken his leg in falling over his brother's stile in the country, the wit observed, "Had it been your own style, you would have broken your neck."

The Scotch have a very large national endowment of this organ. The chief characteristic of their music is strongly-marked time. Their reels, strathspeys, and even ballads, are quite singular in this respect. The street singers and musicians mark time so exactly, yet so strongly, as to caricature it, and overlay the melody with the measure, which should only be its accessory. At school, all the boys when they have an opportunity, beat time with their feet; and the same occurs in the Scotch theatres. The language of Scotch proverbs is full of alliteration and rhythm. Every sentence is a good round mouthful of words. Probably the organ of Time is concerned in the taste we experience for metre or versification. Pope acknowledged that he could more easily express himself in verse than in prose. It would be interesting to inquire, whether extreme ease and felicity of versification be combined with a strong perception of the intervals of time.

We cannot admit that the analysis of the function of this organ is at all satisfactory.

SECTION VI.—*Organ XXXIX. Tune.*

It has been somewhere observed, that there is nothing which so completely demonstrates the gratuitous goodness of God, as the existence of music in nature, and the susceptibility to delight in the concord of sweet sounds, which we observe to be so peculiarly the gift of man. The other arrangements of His providence, it is said, bear reference solely to the useful, are admirably calculated to sustain life, and to perfect reason and morality; but the love of melody, belongs purely to the ornamental and the idly pleasing. This surely is the observation of one, who either has no ear at all, or two very long ones. Nothing proceeds from the hand of the Creator which subserves only a single purpose—in all that He does, there are, and must be a complication of advantages. Pleasure of all kinds is useful. It is as conducive to the prolongation of life, as the law which most eminently has utility or even necessity in view, and it is as important for the sanity of the mind as the health of the body. But, music! divine music! how poor a name is pleasure, to apply to its effects! Well, indeed, is that called divine, which so breathes the balm of heaven. Of all the proofs of immortality, the love of melody is to our mind the least equivocal. There is in it nothing of earth, of sense, of "the lust of the flesh and the pride of life." It is spiritual as the free air, by whose fine vibrations it starts into existence. It is subtle, impalpable, invisible, yet all-penetrating and heart-filling. The being who can love it, was never meant to have his "be all, and his end all, here." To present it to a mortal, is to offer the cooling cup to the thirsty Tantalus, and withdraw the limpid fountain from his parched and yearning lips. It has been the reflection of the pure-thoughted of all ages, that the soul is encumbered by its fleshly tenement, and cabined, cribbed, confined, by its tabernacle of clay. It has been the confession of the logician, that pure reason and precise mutual intelligence, are impossible in beings whose intercommunion of thought is rendered impracticable by the vast distance at which the most perfect form of words is from the real ideas of every speaker. It has been the lamentation of the poet, that the splendour of the most delicate and refined shapes, in which expression was ever moulded, the gorgeous pomp of the sublimity of utterance, and the simple grace of the sweetest words, were all incompetent representatives of the bursting emotions of his melting heart, and the lofty aspirations of his swelling soul. But what musician was ever heard to complain of the inadequacy of *his* language to the utterance of his gayest or deepest feelings?

Yes, music is the tongue of heaven, and the vernacular of angels. It says all that we can think, and speaks all that we can feel. It seizes upon those brightest thoughts which seem corporeal until we try to give them words; and then when we would clutch them in the embrace of language, we gaze while we behold them vanish into air, and melt like breath into the wind. It is most powerful where all else is most weak, and most brilliant where all around is shadow. Those feelings which are most lofty, just because they are least capable of definition—those elegant desires and delicate emotions, whose very spirituality and fragile forms, forbid the cumbrous attire and rude drapery of even the sweetest and most solemn of silver tongues, consigned to the high wardenship of immortal melody, are led willing captives in her golden fetters, and pour out their pure descant into the listening ear of their gentle jailor—those aspirations high and heavenward, which make us almost feel as if they were the fading echoes of a skyey influence, or the faint memories of some former but forgotten state of celestial being, neither earth-born nor time-derived; and which, like the beautiful web hung betwixt the lily's stem and the rose's bud, shaped by the industrious insect into its fair and fastastic festoons, are too filmy and delicate to betray their tiny tracery to the gaze of the unspeculative eye, in the busy day of vulgar life, when the garish sun makes all earthly things more palpable, it is the office of music to breathe upon, as the morning dews rest upon the spider's network, until every thought, like every thread, shall stand confessed; and until to each dream of the throbbing heart, as to each tiny cable that suspends the fairy woof, there shall be given a local habitation and a name!

Never, surely, was philosophy more at fault, than when it talked of music as a thing of sense; or the concord of sweet sounds, as a mere intellectual perception of the harmony of vibrations. The power of song, like the faculty of speech, or the command of a copious verbal vocabulary, is the mere instrument of expression; it is the mind, the heart, the affections, the passions, that inform that instrument with the life which animates. A rhapsody of words, no more makes sweet religion, than a fine ear makes a melodist. As an acute perception of colours never created a Raphael; nor a precise knowledge of grammar or language, a Shakspeare; so, an exact appreciation of melody and harmony, will not constitute a Handel or a Weber. Ideality is as necessary to perceive beauty in tones, as in colours, or forms, or verses; and the ten thousand varieties in which melody presents itself, are as much the suggestions of the varying passions, and affections, and sentiments of the mind, as the innumerable combinations in which words appear in poetry, are the result, not of the organ of Language, but of the prompting heart and suggesting intellect, which stand at either elbow, to give it the cue, and set it to play its part upon the stage, while they behind the scenes, like the successful dramatist, conceive and frame what others are employed to execute. Music is poetry expressed in tones, as painting is poetry expressed in colours; or, as verse is poetry expressed in words. Tune, Language, and Form, are merely the various shapes in which the heart and the affections express themselves, as each of these organs happen to be combined in greater power, with Ideality and Imitation. As there are many fine actors, who merely recite the poetry of others, and fine painters, who merely copy the great masters; so, there are many violinists, and pianists, who compose no music, but give utterance to the conceptions of others. To be a great musician, it is necessary to be a great man. The finest ear in the world, will not make a Rossini, any more than the finest mind will make a Mozart, without a fine ear. Weber must have possessed a soul of the highest order; nor could Beethoven's Sonatas have proceeded from a man destitute of strength or dignity of character, or the oratorios of Handel, from aught less than a Milton, using concords instead of words. Poetry is higher an estimation than music, only because it is more definite and more rude. Were we enabled to understand the language of melody, and to appreciate the delicate shades of feeling which it expresses in the mind of the composer, we would never use words again; but, even in our most solemn hour, would make

“A swan-like end,
Dying in music.”

The musician is as essentially a poet, in all that constitutes the excellence of poetry—in the inward throes of exquisite emotion, in the sublime converse of his own rapt soul, in the ideal world of passionate perfection, in the ecstasies of sentimental

beauty—as the painter or the poet. Hence is his style modified by his faculties. Veneration has its Messiah and Creation; Adhesiveness has its ballads; Combative-ness and Destructiveness have their marches, their spirit-stirring drums, their loud timbrels, and the clangor of their trumpets. Music, too, has its plagiarists—its still-life composers—its Ossians of sublime indistinctness, and its Homers of articulated grandeur and intelligible beauty. It has also its well-chosen plots ill described, and its ill-selected subjects well executed. And as there are infant geniuses, that, by the aid of large Imitation and Form, cut out accurate likenesses, and surprise the town with their representations on the stage; so, there are infant Lyras, and Master Burkes, who, by dint of a powerful organ of Tune, Time, and Weight, play difficult pieces on the piano or violin, but never can invent, or create, or express—and fall, at last, into an adult insignificance.

In truth, the perceptive faculties are the mere instruments by which the passions and emotions manifest themselves; and according as Tune, or Language, or Size, Form, Colour, and Constructiveness are developed, is the pipe which genius chooses to play upon. There is no subject upon which so much ignorant conceit is displayed by poets, painters, and sculptors, as upon the comparative rank which music is entitled to take in the fine arts. We never confound actors with dramatists; but we class performers and composers under the indiscriminate common title of fiddlers or musicians,—and there is an end of the true dignity of music! And yet it is impossible long to cultivate this noble art, without discovering, that in all the elements which constitute a great composer, exactly the same combination of organs is demanded as in the case of other masters of art; with this only difference, that the instrument Tune is substituted for the instrument Language, or Form, and Colour. To the man of cultivated musical taste and deep enthusiasm, the conceptions which melody suggests are as distinct, definite, relevant, and systematic, as either the imbodiment of the painter or the verses of the poet. All the fine arts are suggestive, rather than imitative. Their chief end is to excite thought and feeling, rather than to represent and localise. Their charm lies in their power of calling forth the emotions and reflections, rather than merely realising what is described, or depicting what is conceived. By associating sentiments with scenes, affections with forms, and sunshines and storms of the soul with the serene sky or lowering clouds without, they gain their chief mastery over us; and through the medium of sounds, and images, and colours, shed a reflex suggestion upon the feelings which at first were the prime elements of their creation, as instruments of human thought and passion. How beautiful is the comparison of the poet, of an infant smiling in its sleep, to the moon shining on a wreath of snow! Yet there is not the slightest resemblance betwixt these objects; and all that they possess in common is only this, that they give rise to *emotions* which are similar. The comparison, however, is fine poetry; nay, the essence of rich poetical fancy. And so of music,—tones suggest thoughts, and melodies call up the emotions with which they were at first associated. And these connective influences, which lend the chief charm to immortal melody, are all that constitute the power of immortal verse; and when the nations are as conversant with concords of sweet sounds, as they are with the fine phrensy of the poet, mankind will not hesitate to speak of the bard, as he once was, honoured in his minstrelsy even more than in his muse, and of the notes which he sung, rather than of the verse which was their burden. How great is the power of the Switzer's song, that summons from the dark mists of even the most hazy fancy, his hearth, his home, his wife, his father, and his friend; until all that lies between is lost in the calature of deadly nostalgia, and the heart that beats in vain to pant on the Alpine summits, bursts in the extremity of its desolation! How true is Fletcher's statement, that Scotland was ruled by its lyrics, and that the Jacobite songs made more rebels than the Prince in whose cause they were sung. The reason is, that melody is more suggestive than verse or sentiment; and that it produces action in the passions and sentiments of our nature, in a manner much more direct and certain than any thing which is observed in poetry.

The ideas conveyed in music, are not less precise and definite to the true musician, than those implied in verse or in colours. Irrelevancy, incoherence, abruptness, coarseness, incongruity, are words as applicable to an overture as to a painting or to a poem; and beauty, strength, sweetness, good sense, and good feeling, are terms which no careful student of harmony would consider as at all indefinite. As there

may be verses conceived in the most imposing language, and exact rhythm and metre, which have no ideas in them,—there may be very correct harmony and little melody, a great paucity of ideas, and no relation of parts, in musical composition; and these are reduced to laws as strict and certain as any which regulate poetical composition.

From these observations, it follows, that although the organ of Tune be an ingredient in our love of music, it is only in the shape of an instrument—as Form, Time, Colour, or Size, are in the constitution of a painter, or Language and Imitation in the composition of a poet—*viz.* in giving the direction to the mode in which the passions or sentiments choose to express themselves; and that the feelings of dread, grandeur, produced by hearing the performance of the battle-piece, or the storm, on the great organ of Haerlem, or of *erie sublimity*, which are suggested by the opening of *Der Freischutz*, are the result of the action of the very same organs which produce the thrilling horrors attendant on the witnessing of *Macbeth*, or the description of sin and death in the *Paradise Lost*.

As an organ of perception, Tune presents, in different persons, such enormous varieties, as are not easy to be reconciled with its received function. Some nations are defective in their scale; others, as most of the Indian and Negro tribes, in ear, being also destitute of the power of appreciating harmony; and, indeed, the organ appears, like all the perceptions connected with the fine arts, to be dependent for its excellence and perfection altogether on the advance of civilization. Now, in mere precision of simple perceptions, savages are as distinguished as, if not more so, than civilised races; and hence are we inclined to suspect, that melody and harmony in sound, like the perception of harmony in colours, euphony in language, elegance and accuracy of form and figure, depend upon the combination of the organ of Tune with the sentiments, passions, and intellect in a state of felicitous union, size, and activity. The real function of Tune seems to be, to direct the mind to express itself through the medium of melody, and, of course, to induce attention to the perfecting of that mode of evolving the affections. Kant has remarked it as a law of mind, that the relative perceptions seem to be modes, in which external phenomena are received into the sensorium as impressions, existing not without, but simply shaped by the mind out of the raw material presented to its investigation.¹ Thus it may be with Tune, which out of the gross elements of sound, may select its own aliment, and measure and shape it to its own exact forms and determinate harmonies; as Size perceives space in specific proportions, and Time measures the successions of consciousness by fixed intervals of thought or action.

Certain sounds, independently of mere circumstantial association with states of mind, seem distinctly appropriated to peculiar passions or moods; and we see that savages, and bulls, and lions, make use of peculiar tones to incite them to anger, or to soothe them into tranquillity. Semitones, at long intervals, have a real alliance with depression of spirit; while quick successions of sound produce mirth; and deep, harsh, and loud notes stimulate courage and combativeness.

Great mistakes have occurred in describing the situation of the organ of Tune, by the prevalent error of adopting a fixed instead of a relative position. Even the most expert manipulators may mistake a projection of mere bone for the development of the organ; and therefore, a statement of its size should never be ventured upon, except in cases of extraordinary protrusion of a well-rounded organ, in which case, the manipulator may fearlessly pronounce accordingly. The organ is situated immediately outward of, and on a line with Wit. It is at the top of the forehead, immediately on the corner of the ridge which proceeds from the external angle of the eyebrow, at the organ of Order, and goes up and backward to Cautiousness. It is forward from, and slightly above Constructiveness. We formerly explained, that this ridge ran much higher up in some heads than in others, and that the situation of Tune would alter accordingly. At the end of the book, we have given a lithographic sketch of the head of Mr. John Thomson of Edinburgh, in which the situation of the organ is very accurately given. He has been a successful composer of operas, and manifested musical talent at a very early age. We have examined all the masks of musicians in Edinburgh, and in Mr. Bally's collection at Manchester, and found that they entirely corroborate our views of the situation of the organ.

"The faculty," observes Mr. Combe, "gives the perception of melody; but this is only one ingredient in a genius for music. Time is requisite to give a just percep-

tion of intervals, Ideality to communicate elevation and refinement, and Secretiveness and Imitation to produce expression; while Constructiveness, Form, Weight, and Individuality, are necessary to supply mechanical expertness—qualities all indispensable to a successful performer. Even the largest organ of Tune will not enable its possessor to play successfully on the harp, if Weight be deficient; the capacity of communicating to the string the precise vibratory impulse necessary to produce each particular note, will then be wanting.” He further observes, that the Italian and German head is fuller at Tune than the African, Spanish, French, and English. But we doubt the fact, and think it would not be in conformity with the manifestations. There is a very great taste for music in England and Scotland, not surpassed, we believe, by any nation. The national melodies of the latter, of which Haydn was so enthusiastic an admirer, and the glees, catches, ballads, oratorios, and operas of the former, so ancient in date, and so exquisite in their kind, show not only a high capacity for music, but a wide-spread and truly national taste for it. The poorest ballad-singer or fiddler in our streets, is followed by delighted crowds; and we must take leave to say, that our native *itinerant* performers far excel all our foreign importations of the same class. Every petty church has a volunteer corps of harmony, by no means contemptible; every pot-house has its glee-singers as the chief attraction of the customers; regimental bands have their ten thousand delighted listeners; our concerts and opera performances pay better than any other kind of exhibition; and while, in Edinburgh, Macready acted to a “*five pound house*,” Braham immediately succeeded him, and played to a theatre crowded to the ceiling. What indeed must be the power of song over and in a nation, whose ballads were used as the most powerful instruments of rebellion!

Dr. Andrew Combe had a patient who complained of “feeling acute pain at the external angle of the forehead, precisely in the situation of the organs of Tune, which are largely developed, and upon which, in describing the seat of the pain, she placed most accurately the points of the fingers.” She dreamed much of hearing the finest music; and at last, although very weak, was forced, by “a strong and irresistible passion,” to get out of bed, seize a guitar, and “fairly gave way to the torrent, and with a volume, clearness, and strength of voice, and facility of execution” truly astonishing. After this, the pain subsided. A clergyman, haunted with the ghost of a tune all Sunday, could only lay the spirit by going out to the fields and singing the air with exemplary assiduity and earnestness. We knew a fine musician, who, when puzzled to recollect a tune, invariably and instinctively rubbed his fingers upon the two organs.

Birds with a large endowment of Tune, but no developement of the sentiments or superior feelings, produce notes, but no song, and are destitute of the perception of harmony. It is, however, worthy of remark, that those birds which *speak*, and mimic the human voice, can sing a regular tune; while those which do not, merely present detached notes. We therefore incline to the opinion, that Imitation, and probably Language, are ingredients in the production of continuous and connected melody.*

SECTION VII.—*Organ XXXIII. Language.*

THE subject of Language is involved in great perplexity, and has formed a topic of very extended philosophical inquiry. Many of its simple phenomena are well worthy of attention; and before entering upon the investigation of the function of the organ now to be considered, we shall notice a few facts which may conduce to the expiscation of the elementary principles of the question.

The horse and the dog associate certain simple ideas with certain artificial sounds, used by man to make them obey him. The elephant, the hog, the camel, some birds,

A very valuable contribution has been made, on the subject of Music, to the Edinburgh renological Journal (Vol. ii. No. liv. p. 53), which we shall here abridge:—

Melody or Tune signifies single sounds, each of a definite pitch and duration, succeeding each other in definite musical time. The name *Tune* is therefore improper, for there exists a distinct organ of Time, which gives ideas of the duration of single notes, and their times of succession. Hence, we have, 1st, one faculty, with its organ, to give us ideas of an essential element of melody, namely its time; and, 2d, another to give us ideas of melody as a whole, including time.

The generic terms—Pitch, Duration, Force, or Loudness, and Quality, contain all the varieties of audibility that the musician can detect, and which he employs to produce those effects that

and some fowl, as well as many quadrupeds, do the same. Yet none of these *speak* or return an answer. The parrot, the starling, the crow, and, we believe, other birds, utter a number of words used by man, but they associate no ideas with them whatever. In all ages, there have occurred cases wherein a number of persons have been led, by an irresistible desire, to utter an immense number of verbal sounds, to which they attached no ideas whatever, and which were thence termed the unknown tongues. Then there are the blind, who being able to *discern* no signs of words or motions, make certain raised or stamped figures, discriminated by touch, stand for certain ideas or sounds. Lastly, there are the deaf and dumb, who make certain figures on paper stand for particular ideas—who know thoughts by the mere motions of the lips, and associate mental states with nimble movements of the fingers. Now, here are recorded a variety of phenomena, for which it is quite impossible to account upon any common principle. Some of them manifestly have no relation to the organ of Language at all, and must be carefully separated from it.

Words may be either sounds or figures. The deaf and dumb, and the blind, use figures, letters, embossed or printed, which are directly associated with the ideas they represent, and suggest those ideas whenever the figures are looked upon. Those who possess sight and hearing, use printed letters as the representatives of ideas, and of sounds with which these ideas are associated. They also use sounds as the representatives of printed figures, and of the ideas which these indicate. The sounds may suggest the ideas, with or without the intervening association of the figures; and the figures may suggest the sounds, and through these the ideas, or they may directly suggest the ideas without the associated sounds.

Now, in the case of the blind persons who feel, and the deaf persons who see, these figures (and the latter do not connect these with sounds), it is clear, that they observe them by means of Form, Size, Colour, and Weight, which organs are perfectly competent to perceive, remember, and recognise the figures. By means of Individuality and Eventuality, they may be associated with the ideas of which they are the signs; and here, therefore, there seems no room for the action of the organ of Language. But persons who are in possession of all their senses, make use of sounds as well as figures, as symbols of ideas; and, in regard to these sounds, we yet know not of any cerebral organ as the receiver and perceiver of their impressions. We incline to the opinion, that the organ of Language is that whereby we perceive and remember sounds, merely as such, in the way the parrot or starling perceive them without attaching any ideas to them; and that Eventuality and Individuality are required to connect these sounds with the ideas of which they are the signs. Hence, although by means of the organ of Language, we may amass an immense number of sounds, they will be no more available to us than the unknown tongues are to the Rowites, to which they attach no ideas whatever. To be a linguist, that is to say, to possess a knowledge of an extensive variety of these sounds, and *the ideas attached to them*,

command our admiration. The varieties of Pitch and Duration are accurately written on the musical staff. The elementary part, or A B C of a musical education, is to learn the language of Pitch and Duration. The varieties of *Pitch*, are comprised within the octave or eight sounds, which hold a fixed relation to each other. The varieties of *Duration* are comprised between a Semibreve, the longest sound, and a Demisemiquaver, the shortest. Loudness or Force, is not precise in its nomenclature or notation. The vague terms, Loud and Soft, are the chief distinctions under this general head. The Quality of sound is vague in its nomenclature and notation; the French call it *Timbre*, and sometimes *Ton*.

Pitch depends upon the number of impulses in a given time; Duration, on the continuance of the same number in equal successive times; Loudness, on the extent of excursion of the vibration of the sounding body; and Quality, on its molecular structure.

What, then, is the function of the organ called Tune? It is not duration of sound, which is estimated by Time. It has been found, that persons deficient in musical ear, are not deficient in hearing. They can estimate the relative distance of sound, by measuring accurately the loudness. They also estimate correctly its *direction*, by the same power, and clearly perceive the quality of the sound. Thus, the quality, and the degrees of loudness of sounds are perceived, although the organ of melody be deficiently developed. The inquiry is now narrow, for the only remaining property is the Pitch of sound; and *this is the property which is ill perceived*. There may be discrimination between the sound and its fifth or sixth, but there is no power to discriminate the several degrees of the scale or gamut, and hence, none for the perception of melody. Dr. Thomas Brown, after mentioning the powers of hearing possessed by such persons, says they have yet been incapable of distinguishing the musical relations of sounds, as reciprocally high or low, the melody that results from them in certain successions, and the harmony or discord of their union.

—for example, the meaning of Italian, Greek, or Hebrew words in English,—they must be connected with their representatives or corresponding thoughts, by means of Individuality and Eventuality. The organ of Language alone, therefore, will never constitute a scholar. It must be accompanied with large Individuality, Eventuality, and probably Order. Nay, a deaf and dumb person will, if a linguist, be so without any assistance from the organ of Language at all. But no man can converse in various tongues or dialects, without a very large endowment of this faculty. To give choice of expression and felicity of language, a high amount of the other intellectual faculties must be combined with large Language; the former to produce copiousness, precision, and brilliancy of thought; the latter to present to the mind a vast collection of sounds, out of which the appropriate expression may be selected; the two being associated by means of the organs formerly noticed. Without abundance of ideas, the language will be selected with no skill, and combined with no terseness or felicity. Without abundance of Language, the finest ideas will be without the vocabulary out of which they are to choose their appropriate expression. Their joint action is absolutely necessary to the accomplished speaker or author.

We have conjectured, that the function of Language is the perception of sound; and hence, we incline to the opinion, that accuracy of pronunciation and accent depend upon this organ. We also suspect, that the phenomena of sound are perceived by Language, and that a high development of it is necessary to the accomplished ventriloquist. The modulation of the voice in perfect elocution—the variety of intonation, and the absence of monotony, probably require, in addition, a fair endowment of Tune and large Imitation. Of course, the possession of a large development of the passion to be represented by the speaker, will materially assist the orator in turning his attention towards the tone in which the emotion is manifested in real life. Edmund Kean possessed the deepest skill, in the modulation of his voice, of any actor; and his organ of Language was very large, combined with good Tune and Imitation, as well as large Knowing organs.

Eventuality is of very great importance to the orator. It is by this organ that all former ideas are stored up, connected and arranged in the original order of their entry into the mind; and, by it also, combined with Individuality, that the appropriate language in which ideas are to be clothed, is revolved and settled three or four sentences in advance of the paragraph which the speaker is enunciating. These organs thus constitute a sort of intellectual locality, in which, in his mind's eye, the orator has the whole of his future speech, ideas, and words, before him at one glance, or rather, in one conception.

The size of the organ of Language, is indicated by the prominence of the eyes beyond the socket or cheek-bone, and their projection downwards from the eyebrows. Of course, when the Knowing faculties, at the super orbital plate, are very large, they will project so much as to diminish the prominent appearance of the eyes.

Many cases are recorded, in which lesions of the anterior lobe of the brain were accompanied with an incapacity to conduct conversation, although there was a distinct comprehension by the patient of what was said to him, and a perfect power of articulation. We suspect that all these cases are inaccurately or imperfectly reported, because it is impossible to reconcile them with any known hypothesis. Dr. Hood's patient "comprehended distinctly every word which was spoken or addressed to him; and though he had ideas adequate to form a full reply, the words by which these ideas are expressed, seemed to have been entirely obliterated from his mind." "When any person read to him from a book, he had no difficulty in perceiving the meaning of the passage, but he could not himself then read; and the reason seemed to be, that he had forgotten the elements of written language, *viz.* the names of the letters of the alphabet." Now, here a man comprehends perfectly the sounds uttered by another, and perceives at once their relation to ideas, but cannot comprehend the relations of these sounds with letters (although he does perceive their relation with thoughts), and while he can pronounce words perfectly, does not understand their meaning when uttered by himself. This is quite unintelligible, and we suspect some part of the phenomena is not stated, or has been misconceived. Mr. Combe notices the case of a gentleman, whose "understanding was sound; and he could comprehend spoken language when addressed to him; he could articulate perfectly; but he could not command the proper words to express his ideas." This case appears to us not so difficult of comprehension, although it is not without obscurity.

We can imagine, that the perception of articulation, or, in other words, the relation betwixt certain sounds and the management of the lingual apparatus necessary to produce them, may be affected; or, it may be, that the organ is too feeble to reproduce past impressions, but strong enough to recognise them when presented; as many can perceive a likeness, who cannot paint one—or a landscape, although they cannot describe it when they are removed from the scene.

It may have been observed, that there are many persons, especially among those not much accustomed to read, who articulate every word of the book they peruse. It strikes us, that they have recourse to this method, because printed and written words are not, in their minds, directly associated with ideas, but only with sounds, and that the *sounds* are connected with the ideas. This theory would solve the difficulty started by Mr. Combe, in the case reported by Professor Syme, where “the patient seemed to understand perfectly whatever was *said* to him, but had scarcely any recollection of *written* or *printed* words.” It is not mentioned, whether the patient recognised all other objects of form. If he did not, of course it is not in any degree singular that he should not remember the forms of words; if he did, then it would appear that his mind connected print only with sounds, and the sounds alone with the ideas. This association being destroyed by cerebral disease, the forms of the words would cease to suggest the sounds, and thus to recall the ideas connected with them. Still, the subject is involved in much obscurity.

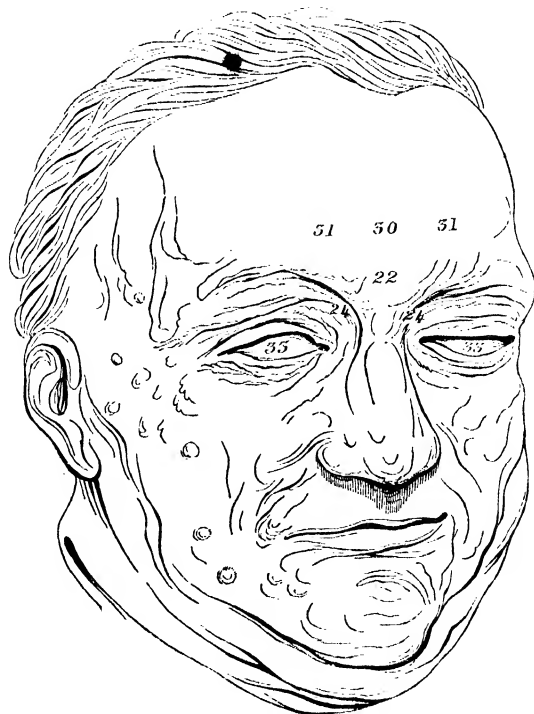
Dr. W. A. F. Browne has detailed cases of maniacs, in whom he infers that there is disease in the organ of Language, in consequence of observing in them rapidity of voluntary utterance, and, also, involuntary utterance to such an extent that the words flowed in wonderful volubility, in direct opposition to the will of the speaker. But we do not consider this as sufficient evidence of disease in the organ of Language. *Video meliora proboque, deteriora sequor*, is too old an adage not to convince us that the passions often overmaster the discretion; and that Destructiveness, Vanity, Fanaticism, will often insist upon giving vent to their feelings in the words with which they have been so long associated, against every argument that prudence can advance. When two denizens of Billingsgate salute each other in their native Doric, no one supposes that the organ of Language is diseased, but only that Destructiveness takes its ordinary channel of speech to relieve its paroxysms. The phenomena of the unknown tongues, however, appear to us to come nearer a simple affection of this organ.

Mr. Simpson, in a clever paper in the Phrenological Journal, entitled, “Sound *versus* Tune,” sums up a number of observations thus:—“1st, Sound is the result of a quality of matter, and therefore must have a faculty for its perception. 2d, The faculty must be a *knowing* faculty, and, as such, should have an organ situated in the anterior lobe of the brain; but the only organ which has been observed in that region, connected with sound, is that which has hitherto been denominated the organ of Tune. 3d, The perception, and, to a certain degree, the discrimination of sound, is necessary to our safety, and is therefore a faculty possessed by the whole human race. 4th, The perception and enjoyment of sounds in musical relation, is not possessed by the whole human race, but only by a part of them, and therefore cannot be the radical base of a faculty. 5th, The perception of Sounds, and the perception of the musical relation of sounds, are powers differing in degree, not in kind, because ALL sounds whatever are essentially musical sounds, and therefore must be perceived by one and the same faculty, though in different degrees. 6th, There is a close analogy between colour and sound; but the same faculty perceives simple colours, and likewise their harmonies in painting; and therefore it is inferred, that the same faculty perceives simple sounds, and their harmony in music.” The second proposition here made, is, of course, incorrect. Language is connected with Sound as certainly as Tune is, and we suspect is more involved in its phenomena. The females of birds do not sing; yet it is nowhere stated that their ear does not discriminate all varieties of tone as precisely as the males. We have known many persons extremely deficient in *musical* ear, who were remarkable for the power of discriminating sounds, so that they could tell who was coming, by the sound of the foot—distinguish easily birds by their cry—and even exactly tell which of many horses was going past, by the sound of its hoofs. They could also recognise individuals by their voice, when they knew nothing of them by their personal appearance. So, the American Indians are sensible of the approach of all persons or animals at an immense distance, by putting their ear to the ground and listening to their tread

or to their cries; while the organ of Tune in them is very indifferently developed. We indeed suspect, that Tune is an organ of relative perception; or, in other words, that, like Time and Locality, it is a mode or form through which the mind observes or is impressed by external objects. Out of the raw material of sound it may select its peculiar aliment melody; and harmony, again, may consist in certain affinities of sound, as palatic taste has its canons for the combination of condiments; while discords may consist of antipathies of notes or sounds, in the same way as there exists an incongruity in the admixture of salt and sugar in equal proportions in any dish. Time and space are clearly mere mental conceptions, by which simple perceptions are related. So may Tune be—not a thing external, but a mode in which we observe sound. May there not be a difference in the power of discerning the pitch of a sound, and its character; the quantity of a line, and its just cadence? Some persons deliver themselves with the most tiresome monotony, but with perfect precision of pronunciation; while others, whose vulgarity of accent and incorrectness of enunciation are hideous, often distinguish themselves by the fine variety of their tone and the skilful management of their voice. These are, however, matters which we must leave for future inquiry. Certain it is, that persons whose organ of Tune is deficient, have a monotonous delivery, and that their inflections are uniformly incorrect.

That the lower animals have a language of their own, seems to be now generally admitted. Probably, it is to a great extent natural language, or that kind of tongue which even men have recourse to for joy, grief, anger, love, or respect; which expresses the passion by the tone rather than by the words; and which, when in contrast to the feeling which artificial language expresses, is always, relied on as the true reflex of the heart. It is very probable, that to each organ is attached an apparatus of its expression, in tone, gesture, the muscles of the face, and, above all, the eye. We have frequently seen hens converse by the eye for a long period together, and terminate a quarrel by this dumb colloquy.

In the mask of Mirabeau the organ of Language is powerfully developed, as also the perceptive region generally, with an amount of Eventuality which would enable him to remember every thought he had conceived, and every sentiment he had expressed.



CHAPTER XIV.

REFLECTING FACULTIES.

ALL reasoning is mere matter of fact. The most profound, subtle, and logical argument, is nothing whatever but a statement of truisms, or of things which have been observed to exist. In a brief space, all that is most admirable in ratiocination may be comprised. Reflection may be reduced to the very simplest elements. To talk of inferences or deductions as any thing else than the mere statement of a rule, is absurd; and rules are made up in the discovery of a resemblance betwixt individual phenomena. When we speak of a resemblance betwixt objects, all that we mean is, that they *strike us* to be the same in certain particulars; and when we have got to that point, we can proceed no further. A conclusion is nothing more than an assertion of fact; to speak of there being a reason for it, is to maintain that there is no such thing as an ultimate truth. Take the simplest proposition, and try it by the test of this principle. When we say, that "things equal to the same thing are equal to one another," we have no abstract reason for the statement, or any ground *a priori* for making such an assertion. Before discovering that it is a fact, we had no more warrant for saying that they were equal to one another, than that they were not. It is only from *having observed* that a great number of A's are equal to a great number of B's and of C's, and that all these B's which are equal to A's, are also equal to C's, that we say all the B's and C's which are equal to A's, are equal to one another; and substituting the word Things for B C, at last aver, that because things are equal to the same thing, they are equal to one another. The term "because," here means simply, "it has been observed that;" and in all cases, this latter phrase may be most usefully substituted. Take the common syllogism:—Man is mortal; John is a man; therefore, John is mortal. Adam, before the death of Abel, could not have understood this proposition. Even when Abel died, he would not have had any idea that other men would undergo a like change, until all men within the sphere of his past observation being found to share exactly the same fate, he had been led to expect that all men in future would also die. But why would he make such an inference? Only from this, that in all things around him, he perceived that what was true of the past and present, uniformly turned out to be true of the future, and therefore, that men to come, would be the same as those who had gone or were going. But because ten thousand men have died, it does not follow that John will die, unless two things are observed; *first*, that John resembles in every respect the ten thousand men; *second*, that in all cases, it has been found that entities which agree with each other in all other respects, agree in their ultimate fate, and that an individual existence which is exactly similar to a great number in its present conditions, uniformly resembles them in its final result. This is the reason why John is called mortal, because man is mortal; and it means no more than that it is a fact established by invariable experience, that all future events, precisely the same as all past events, have been predicated, at any given *punctum temporis*, to terminate in the same way, and that predication has been uniformly verified by the issue.

Referring the reader to Dr. Thomas Brown's Theory of Cause and Effect, the infallibility of which we consider as proved, by a minute examination of all the contingencies to which his principle has been applied, we shall not pursue this illustration further. We shall rather proceed, in the application of these remarks, to observe, that as the construction of the human intellect must, of course, be exactly adapted to the external world, and to the laws of the Creator, it follows, that as all which has hitherto been named reflection or ratiocination, has been discovered to be nothing more than the observation of facts, those powers of the mind which many have conspired to term reflecting faculties, are simply perceiving faculties—organs adapted to the observation of the relations of phenomena, whether of matter or mind.

Ratiocination proceeds from a combination of two powers. The one is the faculty of perceiving succession—sequence—the relation of antecedent and consequent—or the fact, that one event is immediately followed by another. This function is performed by the organ of Causality. The other is the faculty of perceiving the resemblance of sequence; the similarity betwixt a number of antecedents and consequents;

the fact, that a number of events are, in the features of all their conditions, and in the order of their series of occurrence, exactly the same. The organ of Comparison produces this power.* Causality marks the order in which impressions are made upon the mind; Comparison perceives the resemblance betwixt the impressions, and also betwixt the series in which they are observed. We do not suppose that these organs perceive the external world. Our present impression is, that they only observe the action of other organs. We are not of opinion, for example, that Comparison sees a man's face and his portrait, and finds a resemblance betwixt them; or, that Causality marks a lighted match, then its application to the touch-hole of a cannon, and lastly, the explosion. We rather incline to the idea, that these organs perceive only the changes in the states of the rest; and that the perceptive faculties themselves mark the phenomena. Thus, Form is impressed with the face of Sir Walter Scott, it is thereafter presented with his bust; and, in both cases, the action of the external figure has the effect of superinducing in that organ the same state. Comparison, probably, merely perceives the similarity in the two states of the organ of Form, and does not directly observe the likeness of the bust to the living countenance. So of Causality. We presume, that it does not perceive the order of succession of the events or objects of the external world. The Knowing Faculties, as they are called, probably perceive these; and the function of Causality seems to be, simply to observe the succession of states which the other organs experience, by the orderly consequential action of the circumstances of which they respectively take cognisance, and the series in which they are impressed by the phenomena of the external world:

The mode of action whereby reasoning is produced from the action of these organs, will be very easily understood by all who have studied the work of Dr. Thomas Brown. A fair developement of both organs is essentially necessary to the production of a philosophical understanding. To reason correctly, the addition of an average endowment of all the perceptive faculties is absolutely indispensable; for, incorrectness of observation of the external phenomena, or an omission of part of them from the chain of survey, are equally fatal to the accuracy of our conclusions. Deficient in Causality, it is plain that we will not perceive events in the proper order of their occurrence; and on endeavouring to recall them, we will transpose and confuse the series in which they happened. Deprived of a proper share of Comparison, we will be indisposed to observe the resemblance of different orders of sequence, both in the *nature* of the objects classed, and in the *relation of succession* in which each occurs in its respective order. Inaccuracy in either of these points, will most certainly produce a flaw in the whole chain of our ratiocination. If there be a false resemblance betwixt the series of sequences which we compare, of course the conclusion will be wrong which anticipates the same result from the one that has already occurred in the other, and our generalised principles will be educed erroneously. If there be a transposition of any one member in the order of sequence, then the most precise analogy in the world will not produce an accurate conclusion; because the event, in the case which is adduced as the pattern of the one immediately in question, is produced by circumstances which occurred in a different series from those of that chain with which it is compared. A mind which should perceive every step in the class of circumstances which produced any given result, and be strictly accurate in recollection of the series in which they occurred, and which should combine with this element, an infallible perception of the resemblance of any two series of circumstances, would be a truly perfect mind, because its deductions would be absolutely certain.

It is not uncommon to hear metaphysical and moral writers speaking with contempt of men who *reason merely by analogy*. "Comparison," observes Mr. Combe, "gives a tendency to what is frequently called reasoning; but which is very different from the correct and severe inductions of a sound logic;—namely, it endeavours to prove that one thing is of such and such a nature, because it resembles another which is so;—in short, it reasons by analogy, and is prone to convert an illustration

* Mr. Phineas Deseret, a very ingenious Phrenologist, was, so far as we know, the first to state that the function of Causality and Comparison was simply the perception of sequence and resemblance. He also claims, but we think with less success, to be the discoverer of certain views as to the function of Eventuality, which he conceives have anticipated our theory. We do not however perceive any thing in his opinions materially different from those of Spurzheim and Combe.

into an argument." And what is any argument whatever, but simply an illustration? Or what possible reason can be assigned for coming to any conclusion, upon any subject—we care not what—but simply, that all the premises exactly resemble others which had a similar conclusion? Nor can there be the least doubt in the mind of any man who understands the question at all, that where all the circumstances in two series of events are the same, the result of the one must be precisely that of the other; and all our notions of design in the government of the universe, and all our impressions of the existence of laws, physical, organic, and mental, emanating from God, have no other origin than this,—that it is not in the least uncertain what conclusion will follow from given premises; but that so far from its being left to chance whether any series of conditions will have a peculiar end, it is inevitable that because exactly similar orders of succession have had a certain conclusion, this which is under immediate consideration must and will terminate in the same result. All errors in logic, indeed, arise only from this circumstance, that men do *not* reason from analogy, but rather derive the same conclusion from two sets of circumstances which do not resemble each other. Mr. Combe has mistaken altogether the cause of superficial reasoning, when he attributes it to an over-development of Comparison. That organ perceives resemblances in the objects or relations furnished to it by the other organs; and if it be large, these will be perfectly accurate. But if the other organs give in a false report, the keenest perception of analogy must of course produce only error in its conclusions. The general fault in superficial logicians, is, not the possession of too large Comparison, but of *too small Causality*, which, either omitting some steps of the series of sequences, or not being sufficiently powerful to register the series in which they occur with precision, but, on the contrary, transposing some of the steps, gives to Comparison a false representation of their order, and thus tempts it to make a false conclusion, by furnishing it with erroneous premises. Take away reasoning by analogy, and there will remain absolutely nothing. Causality without Comparison, is inoperative in logic. It perceives the premises, but never can make the conclusion. It observes the chain of succession in events—the series in which circumstances occur; but there its function begins, and there it ends. It is to Comparison, as are objects in their abstract and simple state to objects in their relative and classified form—the tools of trade, but not the workman. As in the case of Widow Quickly, it can detail every step in the progress of occurrences, in the exact order in which they happened; but, destitute of the power of detecting any resemblance betwixt these and another series of events which had a certain issue, it has of course no *datum* for a conclusion. We speak advisedly, when we adduce the detailed appeal of Widow Quickly to Falstaff, as a specimen of active Causality; and it needed but the same precision in the perception of sequence, transferred to the observation of other events, and a powerful Comparison to detect the resemblance of the order of sequents in any particular class of phenomena to any other, in order to have enabled her to generalise and draw conclusions with the most profound philosopher. Let any Phrenologist study this question with strict reference to fact, and he will very soon discover many persons endowed with considerable Causality, and a very limited intellect. He may find an individual in whom the prominence of this organ amounts to a singularity, if not a deformity, and yet who is incompetent to the task of generalising, or of forming any great principles of causation. Accurate indeed, and punctiliously precise, he will be, in perceiving the order of any series of events; but he will be found totally incompetent so to class various chains of circumstances, as, from detecting the resemblance of their premises, to predicate the similarity of their conclusion.

Gall and Spurzheim form a happy illustration of the effect of the separate action of the two organs of Causality and Comparison. Gall's Causality was large, and his Comparison barely average. Spurzheim possessed only fair Causality, but very large Comparison. What was the result? It is notorious, that Gall seldom ventured to generalise; while the fault of Spurzheim was, that he was apt to generalise rashly; and before he had sufficient data for warranting the classification of phenomena into principles. Gall told exactly what he saw—Spurzheim what he inferred from what he saw. Gall observed Destructiveness as the antecedent, and murder as the consequent; Spurzheim found that there were two antecedents of large Destructiveness which resembled each other, but that the two consequents which followed, were dissimilar—the one resulting in murder, the other not. But he observed, in

all cases of large Destructiveness, a uniform similarity in great liability to anger and malice; and by thus reasoning analogically, approached nearer the function of the organ.

To the attainment of correct logical inference, is required the possession, not only of the organ of Causality—which observes the order of sequence, and Comparison, which perceives the resemblance of the orders of sequences, and of the nature of the objects which exist in the relation of succession, or, in other words, discovers the uniformity of antecedents and consequents,—but also of all the perceptive faculties. We have already remarked, that all reasoning is but the statement of mere matter of fact, and learned altogether from experience. Correct observation of facts, is, therefore, of course, essential to sound ratiocination. Colour, Form, Number, very frequently, for example, may, in a series of events, by which we mean the order in which objects or subsistences occur in time or place, be an essential condition of resemblance in two sets of phenomena; and, if a man with the finest Causality, be deficient in the power of discriminating shades or hues, shapes or quantities, or possess so small a development of the Knowing faculties just enumerated, as not to take notice of the qualities which are their related objects, it is very clear, that his perception of the analogous conditions in the steps of the series of the events compared, must be defective and erroneous. Thus, for example, Dr. Dalton, the celebrated chemist, is unable to perceive colours, or the differences of shades; and in his observation of the succession in the order of chemical phenomena, he, of course, although Comparison and Causality were ever so powerful, might easily mistake one ingredient or substance which forms an essential element in the chain of sequences, for another; not possessing the organ of Colour to guide him, as a condition of the perception of resemblance betwixt the two series of phenomena. Were his Causality small, the order of succession of sequences would be forgotten—all the steps remembered—but jumbled together so heterogeneously, that the result would be a complete obliteration of the whole principle upon which causation or rather sequence depends.

Suppose a being who had never heard of gunpowder or cannon, to see them applied to their purposes, he would observe that the powder was put into the cannon, then colphin, and pushed down with the rammer; he would remark, that a ball then followed, colphin again, with a second application of the rammer. At last, a lighted match is applied to the touchhole, followed by a flash, a loud noise, a starting of smoke, and a ball bounding forth and mowing down the enemy. If the observer's Causality be good, he will remark the exact order in which these sequences occur, and will be able to repeat them correctly, with the same result. If his Causality be bad, he may, when directed to perform the same operation, transpose the whole sequence. He may put the colphin in first, then the ball, and apply the match to the touch hole before loading with the powder, and wonder that, remembering all the steps of the process, he should not attain a successful result as before. If his Comparison be weak, it will be impossible for him to generalise upon these phenomena. The slightest deviation from the line of sequences, or the smallest omission in the steps, will be looked upon by him as a totally different process, and expected to terminate in another issue. But Comparison will detect the points in the series of antecedents in which many trains of phenomena and their results resemble each other, and what steps and particulars, by not resembling each other, are not essential to produce the same termination. These various particulars of discrepancy in the antecedents being left out of the process, the real elements of the effect, will, by their resemblance, be detected, and an abstract principle evolved; for all generalization consists of abridgement, the omission of accidental attributes, and the reduction of a series of sequences by a comparison of their analogical features, to other series, or, in short, to the exact number of resembling steps. Thus, an unlearned man, with large Causality and small Comparison, mixes a solution of carbonate of soda, with tartaric acid, and the result is an effervescence. But mere Causality could never generalise, or proceed farther. The whole proposition would, after a thousand antecedents and consequents, of the same kind, still be simply, that by adding carbonate of soda to tartaric acid, there will result an effervescence. It might see a thousand mixtures of alkalis and acids, with the same result of effervescence; but the individual with only Causality, remembering the series of steps in each particular case, and the identical consequents from the various antecedents, with minute precision,

would only, in each example, say, that the mixture of a specific drug with another, as exactly named, would produce an effervescence. It would be carbonate of soda, for example, and tartaric acid. But add large Comparison, and the effect will be very different. It will, in the first place, perceive a resemblance or identity in all of the consequents. The results will therefore be connected, or classified, in the first place. Then it will detect a resemblance in the taste and other qualities of the respective ingredients of the chemical compound in all the antecedents, until the qualities which truly resemble each other, in the elements of the materials forming the mixture, being, in all the examples, observed, clearly seen, and classified, soda and tartar will be omitted from the proposition, and the general principle evolved, that the commixtion of a solution of acids and alkalis (the points in which alone all the antecedents agreed) will be productive of an effervescence, or disengagement of the fixed air.

Immediately adjoining the organ of Causality, outwards, and bounded by the upper part of Tune, another organ exists, which we have already had occasion to observe has been hitherto designated Wit. That it is a superior intellectual, or what is generally termed a reflecting faculty, we feel satisfied, from its position in the brain. That it performs functions of a high order, appears to us also certain, for it is uniformly found large in the most acute philosophical and subtle minded men. Mr. Hewett Watson terms it the faculty which detects the intrinsic properties of things, and which, "directed towards man, probably gives a tendency to investigate the real character, instead of resting content with observing appearances or actions." He disagrees with Mr. Scott's theory upon the subject, which is, that as Comparison perceives resemblances, Wit observes differences. Now, it appears to us, that there is strong ground to believe that Mr. Scott is in the right, or rather, that both are so; because, by a process of analysis perfectly admissible, there is not much reason to doubt that the one definition is embraced in the other. Having perceived all those steps in the order of two series of events which resemble each other, the power of next detecting those which have no similarity, or the particulars in which the two disagree, is all that is necessary to ascertain the true elements of agreement, or the intrinsic properties of the sequences contrasted or compared. For example, in the following passage from Dr. Thomas Brown, whose organ of Wit was large, the true and intrinsic qualities of a chain of sequences are determined solely by an exposition of differences:—"It has been maintained by Dr. Reid, that there are cases of uniform succession, in which the belief of causation is never felt; since, from the very commencement of our existence, day has succeeded night in endless return, without any supposition arising that night is the cause of day. *But it should be remembered, that day and night are not words which denote two particular phenomena, but are words invented by us to express long series of phenomena.* What various appearances of nature, from the freshness of the first morning beam to the last soft tint that fades into the twilight of the evening sky—changing the progress of the seasons, and dependent on the accidents of temperature, and vapour, and wind—are included in every day! *These are not one, because the word which expresses them is one;* and it is the *believed relation of physical events, not the arbitrary combinations of language,* which Mr. Hume professes to explain." In the argument which Brown here explodes, Reid had been endeavouring to show a resemblance betwixt the antecedence and consequence of night and day, and any other series of connected phenomena; and, by proving that the result is not the same in both cases, trying to show that Hume's principle of causation was erroneous. Strange, by the way, that he should have adopted, not hypothetically but sincerely, Hume's very theory, for the purpose of refuting it. Brown answers him by showing that there is a *difference* betwixt the terms day or night, and any series of phenomena related by sequence; and that there is no resemblance of the example given, to the other cases from which the general principle is deduced. The intrinsic properties of things are, in fact, simply those in which there is a difference, distinguishing one from another. Sun, earth, tree, man, are what they are, simply because they are not the same as something to which we give a different title. Foreign or superfluous circumstances in a chain of events, are those which are not concerned in producing the result which we observe or expect to flow from them. To ascertain these, we compare the whole series with another which have produced the same effect. In retaining the inherent and discarding the accidental properties of the

antecedents, we simply preserve the features which resemble each other in the two series, and suppress the dissimilar. "The truth is," says Brown, "that the superfluous circumstances are merely those of which we have had *contrary* experience, having observed them before, without the succession of the effect; and when the complex sequence is stripped of these, it becomes exactly of the same kind as the first sequence observed by us, when we had no experience either of essential or of superfluous circumstances." As a specimen of the operation of Wit, Mr. Watson gives this quotation from Sterne:—"The sons and daughters of service part with liberty, not with *nature*, in their contracts." Now, what is this but a description of the *difference* betwixt nature and liberty? Had there been no *liberty* with which to contrast *nature*, it would have been impossible to have said any thing intelligible here; for, after all, we mean nothing more by the *intrinsic qualities of any thing*, than merely the particulars in which it differs from every thing else. So, when a gentleman of extensive acquirements had finished a very searching examination of his nephew's attainments, a listener declared that the examinant was a perfect walking dictionary. "Not so," observed the youth, "a dictionary *explains*, but he *puzzles*." The point of this lies altogether in the exposition of the *difference* betwixt the gentleman and the dictionary, or the want of resemblance betwixt the two objects compared; although the effect unquestionably of the perception of these differences, is to detect intrinsic and inherent properties, which is only another name for qualities belonging exclusively to the subject of observation. In this way, Wit may be said to feed on the offals of Comparison—to pick up, in short, all that is left by that organ.

We have long remarked the greatly superior analytical power manifested by individuals possessed of a large organ of Wit; and are much disposed to suspect, that Comparison and Causality, combined in any form with the other intellectual faculties, are insufficient to account for several qualities of ratiocination. The perception of sequence, acquired by Causality, and of the resemblance of sequences, furnished by Comparison, enables us unquestionably to generalise, and often to generalise a great deal too rapidly. But we are quite aware that there is another power, essential to a philosophical understanding, and that is, the faculty of taking classification to pieces, of reducing principles to the elements of which they were formed, and of breaking down an abstract rule, into the individual phenomena out of whose common features it was originally composed. This power, it is probable, the organ of Wit may supply; which if it do, the entire range of mental operations seems to be accounted for.

In objecting to Dr. Brown's definition of cause and effect, Mr. Combe observes, that "in addition to the invariable sequence which Eventuality perceives, a notion of power or efficiency in the antecedent to produce the consequent, appears to me to arise in the mind, when contemplating instances of causation in nature; and this notion seems to be the mental affection connected with the organ of Causality." This is a loose method of writing, in which it would be very desirable that Phrenologists would indulge as seldom as possible. A notion of power in the antecedent to produce the consequent, independently of any reason for entertaining that notion, is a mere sentiment or emotion, not an act of the intellect. If there be any reason in the matter, we find even from Mr. Combe's own previous admission, that all the foundation that there can be for such an inference, is merely the perception of invariable antecedence; so that Causality, as a purely reflecting or ratiocinating power, can be nothing else than a faculty which takes cognisance of the order of sequence. If Mr. Combe's idea were true, that the notion of power in the antecedent "seems to be the mental affection connected with the organ of Causality," it would follow, that the larger the organ of Causality, the more irresistible would be the tendency to the notion of power in antecedents. But we know, that so far is this from being the case, Hume and Brown—the metaphysicians possessed of by far the largest faculty of Causality—have principally distinguished themselves by proving that this notion is altogether fallacious; and, indeed, the chief office of Causality is exactly to satisfy us, by patient investigation, that we have every day erred, in assigning to apparent antecedents an efficient power to produce the consequent, which they do not possess. That we have a notion of such power of causation, is indeed true, and that long prior to the experience which can alone warrant us in inferring it; but, that it is irrational and without proof, and, therefore, not only not produced by, but in the very face of Causality, appears to us as plain, as that the impression

of the existence of such power decreases with every year in which we have availed ourselves of the advantages of reflection and experience. The notion of power, is a sentiment or emotion, probably arising from Wonder, supported by uniformity of effect from uniformity of antecedent. It is most powerful in the least rational, the infant and the savage, simply, because the errors produced by strong feelings, are, in them, least corrected by knowledge and induction.

We have said, that Causality and Comparison take cognisance of the order of ideas, and the resemblance of their sequences, and that they observe the phenomena of propensity and sentiment in the sphere of their several functions of relation. This explains completely the phenomena of a kind of metaphor, or simile, for which, at first, it is not very easy to account. We mean resemblances, in which there is no similarity in physical appearance or intellectual quality, and yet which are felt to be strikingly analogous. In the comparison of a child, smiling in its sleep, to a moonbeam on a flake of snow, there is, in fact, no resemblance whatever; yet, it is a fine simile, and a correct one. The secret of the similarity is this, that the *emotion* which each gives rise to, is the same, or nearly the same; and that we take the *actual objects* as the cause of our sense of resemblance, instead of the *feelings* which they suggest. This principle will explain many of the phenomena of Comparison, which have hitherto been left unaccounted for. It seems, also, to be the solution of the problem as to the use of figurative terms, which form so large a portion of ordinary language. Thus, when we talk of bright ideas, sweet thoughts, and gloomy sentiments, we, in truth, are not characterising these psychological states, but the feelings and conceptions which they produce, as being similar to what we experience in a sunny day, a saccharine taste, or physical darkness. In this respect, Comparison may be said to be the faculty which perceives qualities.

We have thus given a general view of the function and phenomena of the Reflecting faculties; but, in conformity with our general plan of arrangement, we think it proper to lay before the reader, under the proper divisions, the view of the received opinions concerning them, which here follows.

SECTION I.—*Organ XXXIV. Comparison.*

THE organ of Comparison is immediately above Eventuality, and below Benevolence; or in the centre of the upper boundary of the forehead proper, or frontal bone; and its shape is somewhat of the form of an inverted pyramid, when largely developed, and not balanced by large Causality.

Dr. Spurzheim designates it the faculty whose aim it is to form abstract ideas, or generalizations, and to establish harmony among the operations of the other faculties. He supposes each organ to compare within its own sphere; and that the object of Comparison, is to perceive resemblances betwixt objects observed by two or more of the other organs. It is fond, he thinks, of congruities, and cannot bear a dancing tune played in church, or lively colours in the representation of a gloomy scene. We have already assigned reasons for supposing that this feeling of congruity and incongruity arises from an association either innate or artificial, betwixt certain colours, tones, and forms; and that, probably, the sense of appropriateness of certain figures to particular localities or colours, and specific tones to peculiar moods of the mind, is derived altogether from these having been originally connected by early association. A writer, in the Westminster Review, has very plausibly endeavoured to prove, that laughter is caused by the sudden concurrence of two opposite emotions in the mind, at the same time; and we have some reason to think, that grief is the result of a sense of the contrast betwixt two opposite states of the same individual; or, perhaps more properly, the co-existence in our own minds of two opposite emotions relative to one object. We do not, however, think that in either case Comparison operates to produce the effect; because we think that all the examples quoted by Spurzheim, resolve into the co-existent activity of contrasted feelings, or states of emotion, which, by their own operation, and not by any perception of contemporaneous incongruities, are quite competent to produce the result described. The antagonism of the emotions of mirth and reverence, is sufficiently felt, without being perceived by Comparison.

Mr. Combe thinks this organ gives rise to proverbs, parables, figures of speech, and similes; the subject of the metaphor being determined by the relative size of the other faculties. Dr. Chalmers, he observes, draws his illustrations from his favourite studies—mechanics and astronomy; while Sheridan and Swift, in whom Form and Size are very large, derive their comparisons from these organs. He finds it large in the French, in successful school-boys, in children, and also in Pitt, Moore, Jeffrey, and in all popular orators.

Mr. Scott substantially agrees with Spurzheim; and thinks that the organ discovers “in no case, *direct* resemblances, such as are perceived by the observing powers, but *relative* resemblances, or, to speak more accurately, resemblances, not between the objects themselves, but *between their relations* to other objects.” Mr. Watson conceives the simple function of the organ to be a *perception of conditions*. “If,” says he, “we say, ‘the *tall man* walks,’ we address Size, Individuality, and Eventuality; or if we say, ‘the *black man* rides,’ then Colouring, Individuality, and Eventuality, combine in uttering and in understanding the proposition. But suppose that we are told that ‘the *miserable man* runs along the road;’ here we have, first, the man—second, his condition, *miserable*—and, third, his action, *running*;—now, what organ takes cognisance of his condition? It is obvious that it must be an organ distinct from the other two, because the mind can conceive the man without his action; it can conceive the man and his action, without thinking of his condition, and his condition without adverting to his action: his condition is, therefore, a third and separate consideration, introduced as an article of additional information.” Vimont observes, that “three faculties, placed in the middle line of the frontal bone, are very nearly allied. By the first we derive our notions of the existence of bodies (organ of the perception of substance); by the other, we detect their possible modifications (Eventuality); and, finally, by the third, we discover the relations which exist betwixt these, as well as the differences which they present. I believe it is the faculty termed by Gall, Comparison, which detects relations; and on this account, I propose to call it the organ which perceives the states of objects. I shall illustrate by an example my ideas on this subject. Comparison, properly speaking, can only exist betwixt things of the same nature,—as forms with forms, colours with colours, sounds with sounds, and so forth. But if I compare a lily to innocence, life to a river, &c. &c., it is no longer genuine comparison, but language altogether figurative and metaphorical.”

M. Vimont supposes this faculty to exist in the lower animals, and points out what in them he conceives to be the seat of the organ.

SECTION II.—*Organ XXXV. Causality.*

THIS organ is situated immediately on each side of Comparison, and in general presents the appearance of two knobs very easily felt and seen.

“Individuality and Eventuality,” observes Mr. Combe, “take cognisance of things obvious to the senses. Causality looks a little further than these, perceives the dependencies of phenomena, and furnishes the ideas of causation, as implying efficiency, or something more than mere juxta-position or sequence. It impresses us with an irresistible conviction, that every phenomenon or change in nature, is caused by something; and hence, by successive steps, leads us to the great Cause of all. In looking at the actions of men, it inclines us to consider the motives, or moving causes, from which they proceed. Individuality and Eventuality apprehend facts and events, or take cognisance of direct evidence; Causality judges of circumstantial evidence, or that by inference. In a trial, a juryman, with large Individuality and Eventuality, and small Causality, will have great difficulty in convicting on circumstantial evidence. He in whom Causality is large, will often feel that kind of proof to be irresistible. This faculty induces us on all occasions to ask, Why is this so? It gives deep penetration, and the perception of logical consequence in argument. It is large in persons who possess a natural genius for metaphysics, political economy, or similar sciences. When greatly larger than Individuality, Eventuality, and Comparison, it tends to vague generalities of speculation, altogether inapplicable to the affairs of life; and hence, those in whom it predominates, are not calcu-

lated to shine in general society. Their sphere of thought is too abstract to be reached by ordinary minds; they feel this, and remain silent; and hence, are reputed dull, heavy, and even stupid."

"A great defect of the organ renders the intellect superficial; and unfits the individual for forming comprehensive and consecutive views, either in abstract science or in business. Coincidence only, and not causation, is then perceived in events. Persons in whom it is deficient, are often admirably fitted for common situations, or for executing plans devised by profounder intellects; but if they are entrusted with the duties of legislators, or become directors in any public affair embracing causation, it is difficult to make them comprehend the natural dependencies of things, and to act according to them. Blind to causes, and to remote consequences, they stigmatise as visionary, all intellectual perceptions which their own minds cannot reach; they reject principle as vain theory, are captivated by expedients, and represent these as the *beau ideal* of practical wisdom."

Vimont, George Le Roi, and Dupont de Nemours, cite many instances, in which they state this organ to have been eminently manifested in the lower animals. Vimont does not point out the seat of the organ in the brute creation.

We have already assigned our reasons for dissenting from the views entertained by Mr. Combe and other Phrenologists, of the function of Causality, and for placing it in rather a less important position than it has hitherto occupied. Reason is the result of all the intellectual faculties; and it is not easy to call them other than a republic of organs, consisting neither of kings nor subjects. No man will make a good metaphysician or philosopher who is indifferently endowed with the Knowing faculties; and without considerable Eventuality, to record complex ideas, he will certainly fail to think to any very important purpose. Without fair Comparison, Causality cuts a very poor figure, however large it be; and without more than average knowing organs, there will be no success in mental analysis or physical investigation. The data will always be wrong; and many important steps in the series of sequence will not be observed, or will be overlooked or forgotten. In all cases, a very moderate share of the Reflecting faculties, combined with very large Observing organs, will accomplish far more, in *any given branch of science*, than powerful Comparison and Causality, with small perceptive faculties. To the metaphysician, Eventuality is quite as necessary as the Reflecting region; and in men eminent in the knowledge of psychological phenomena, it will always be found powerful. An intimate acquaintance with the simple facts upon which all generalization and induction proceed, is indispensable to sound conclusions; and these are only to be observed by the organs of simple perception.

A very considerable portion of the argument upon the philosophy of cause and effect, both in the theories of Hume and of Brown, is occupied in ascertaining the principle upon which the expectation arises in the mind, that the result of future series of sequences will be similar to the past; but we entertain some doubts of the soundness of their ideas on this subject. We think the terms *past* and *future* apt to mislead; nor does it appear to us that the word *expectation* is a legitimate one, when applied to the action of the intellect in the perception of causation. Thought and perception are not at all necessarily associated with the idea of time. We take no note of moments when we reason. When we say a thing *will* happen, because it *has* happened, we use terms which very conveniently suit our method of describing the phenomena of thought, as they occur in our minds; but we are, in fact, transferring the action from our own intellects to the thing observed, and predicating a change in *it*, which will be truly in *ourselves*. The word *happen*, means not what will be, externally, but what will occur in our thoughts; for the future, in regard to the laws of nature or of mind, is but the present, if we suppose *time*, which is a mere mental relation, scored out. When we see a series of sequences, which we have observed a thousand times before in exactly the same order, we in fact see exactly these former sequences in a different *time*, an idea invented by ourselves, or rather a relation, or mode through which the mind perceives external objects or its own mode of action. The idea of time, indeed, is only a name which conveniently designates the priority and posteriority of ideas, in the succession in which they occur in the mind; the more vivid and fresh being conceived of as occurring last, and the more faint and dim impressions retreating into a vista or perspective of recollection, which becomes more clouded and misty as it disappears in the distance

of memory. Accordingly, we speak of events long past which made a powerful impression upon us, as if they occurred but as yesterday; being only corrected in our chronology by connecting the leading occurrence with its less deeply impressed accessory circumstances. When we aver that gunpowder *will* produce combustion, all that we mean is, that *it does produce combustion*; and when we observe existing phenomena, we have, in point of fact, simply past phenomena present at a different time. Now, it is a principle of association, that the presence of one of a class of ideas, originally combined in the mind, will suggest the recollection of the whole class; and a perception of a series of sequences, which we have seen before, most naturally suggests the existence of the same conclusion. In this way, our predication of an effect from any given cause, is but a perception of the past consequent of a foregone antecedent, in present, instead of in former time; and when we prophesy that a certain result will follow from a given train of consequences, we say no more than if we were to observe, that when we see the Lord Chancellor we shall also see the woolsack, and a very large wig worn by a very grave and respectable-looking man. But this is, in point of fact, not stating what we expect to see, but what we did see, substituting only the future time for the past. The laws of God are the same yesterday, to-day, and for ever. With his statutes, a thousand years and one day are identical; and when we venture to expect that one thing will happen after another shall have happened to-morrow, we know that nothing has occurred in the external world different in any two cases, but that our relation alone to it has changed from the past to the present or future. What has occurred, and does and will happen, is a perpetual law, only at intervals observed, although constant in operation or in the latent susceptibility of action; and we anticipate that a given effect will result from a given cause, only by that effect in past time having been associated in our minds with that cause, and suggested by the recurring perception of the antecedent. The impression of the existence of invariable laws, in which we have entire confidence, arises from the perception of past uniformity of sequence, and that uniformity having been connected in our minds with the observation of all phenomena, of course, the perception of all future sequents will be associated with the past impressions of uniformity; and the expectation of future results being the same as the past, will simply be the suggestion of the former invariability of antecedents and consequents caused by the presentation of any existing phenomenon. In truth, we know that all the future already is, and for ever has been. What will be to-morrow, is as fixed and certain in all its contingencies as if it had been passed. Whatever may be our ideas of causation, we know that they will make no change on the universe. When we are prophesying what will be, we are only guessing what is; for the future is, and we can only predicate accurately if we expect as nature has decreed. The future, the present, and the past, are men's device, not God's. An omniscient being, whose intellect can at once embrace an infinity of thought, and who has therefore present in his mind a conception for every actual entity *in rerum natura*, has, and can have no times or seasons. But a finite and ignorant being can have present to *his* mind only a few ideas at a time; and, therefore, to possess any thing like an adequate conception of a complicated concurrence of phenomena, man must observe them in succession, and reason upon them piecemeal. Hence, the past, the present, and the future, are neither more nor less than expressions suited to designate the order in which ideas are presented to the mind, and in which entities are perceived by us; and do not properly describe the universe we look upon, but rather the mode in which we look upon it.

FINIS.

GLASGOW:
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